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# PENDING APPLICATIONS

Law Department - Patent Section  
Philip Morris Management Corp.  
Privileged and Confidential

21 May 1992

2020109929

PM 964 - SN 204974

SMOKING COMPOSITIONS

Y. Houminer and H. Grubbs  
Chemical Research

This invention provides tobacco and non-tobacco smoking compositions which contain a heterocyclic-hydroxy-substituted carboxylate compound as a flavorant additive.

Schardt/D&O

- 11-7-80 Filed in PTO; assignment recorded.
- 9-14-81 Restriction requirement.
- 11-26-82 Response electing Group III (claims 11-31).
- 3-1-83 1st action indicating informal allowance.
- 4-18-84 Memo to inventors/manager recommending abandonment in view of art cited in corresponding foreign cases.
- 4-20-84 Amendment filed.
- 6-11-84 Farone indicated that no further action be taken in view of cited art.
- 12-5-84 Director review--Schardt reviewing this case and related DIVs.
- 7-10-89 Notice of allowance--claims 10-31 allowed.
- 8-9-89 Issue fee paid.
- 2-15-90 Depaoli asked to check status - Patent Office cannot locate file.
- 4-25-90 Letter from Depaoli--PTO quality control audit--to be re-examined.
- 10-4-91 Depaoli instructed to file status inquiry.
- 11-6-91 Depaoli checked with Examiner. Action was mailed 6/90 but wrong serial number was on it and it was directed to the wrong address. Case went abandoned but Examiner to re-activate and sent out new action.
- 1-27-92 Action.
- 3-4-92 Amendment filed.
- 3-25-92 Notice of allowance (fee due June 25).

Corresponding foreign applications/patents in: Argentina, Australia, Brazil, Canada, and Venezuela

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2020109930

**PM 1200DIV - SN 618913**

**NOVEL NICOTINE ANALOGS**

T. Osdene, H. Secor, and J. Seeman  
Chemical Research

A novel class of nicotine analogs which as therapeutic agents exhibit tranquilizing effects in mammals. An example is 1-(3-dimethylaminopropyl)-2-(3-pyridyl)pyrrolidine. The nicotine analogs can exist in the form of acid addition salts.

Schardt/Depaoli

11-28-90 Filed in PTO with preliminary amendment.

7-16-91 1st action.

7-24-91 Amendment filed.

3-19-92 Telephone interview with Examiner--claims 30-31 and 34-35 will be allowed.

3-24-92 Notice of allowance (fee due June 24).

Foreign applications corresponding to the parent case were filed in Japan and the EPO designating all countries except Luxembourg.

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**PM 1213 CIP IV REISSUE - SN 823001**

**METHOD AND APPARATUS FOR COATING EXTRUDED TOBACCO-CONTAINING MATERIAL**

G. D. Keritsis

Schardt/F&N/Radulescu

12-13-91 Filed in PTO.

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2020109931

PM 1246 - SN 630481

*\*ISSUED\**

(Filter Technology) FLAVOR-ENHANCING SMOKING FILTER

G. Keritsis

A flavor-enhancing smoking filter having at least two concentric zones, including at least one filtering zone and at least one flavor-enhancing zone. The flavor-enhancing zone(s) have a flavorant, have a surface providing for the substantially laminar flow of smoke and permit the passage of none or a minority of the smoke drawn through the filter.

Schardt/F&N/Storella

12-20-90 Filed in PTO; assignment recorded.

5-26-92 Issued: 5115823.

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2020109932

**PM 1268 - SN 122760**

**(Project Art) PROCESS AND APPARATUS FOR THE SEMICONTINUOUS  
EXTRACTION OF NICOTINE FROM TOBACCO**

R. Prasad and H. Grubbs  
Tobacco Materials/Chemical Research

A process is provided for the improved removal of nicotine from tobacco. A nicotine-free solvent in the supercritical state is fed into a first end of an extraction system containing tobacco and a nicotine-rich solvent is discharged from a second end of the extraction system. Periodically a portion of extracted tobacco is discharged from the first end of the extraction system while simultaneously a portion of an unextracted tobacco is charged to the second end of the extraction system.

See also PM 1267 and 1355

Schardt/F&N/Krasnow

11-19-87 Filed in PTO; assignment recorded.  
6-28-88 Information disclosure statement filed.  
1-30-89 1st action.  
6-30-89 Amendment filed.  
10-31-89 Supplemental amendment filed.  
10-27-89 2nd action.  
11-3-90 Response filed.  
1-19-90 3rd action allowing all claims.  
3-1-90 Amendment filed.  
6-20-90 Examiner communication suspending prosecution for 3 months  
pending availability of pertinent Supplemental IDS filed.  
9-20-90 Status inquiry filed.  
10-25-90 Meeting with Krasnow/inventors.  
12-20-90 4th action.  
3-19-91 Response filed.  
12-23-91 5th action.  
3-4-92 Response filed.  
3-25-92 Supplemental amendment filed.  
5-6-92 6th action (response due July 6--Krasnow drafting response).

Corresponding foreign applications filed in Argentina, Australia, Brazil, Canada, Finland, Japan, South Africa, and EPO designating Austria, Belgium, Switzerland, Germany, Spain, France, UK, Greece, Italy, Netherlands, and Sweden.

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PM 1279 - SN 246768

(Bonded Ends) DROPLET JET APPLICATION OF ADHESIVE TO CIGARETTE ENDS

R. Gaudlitz, J. Washington, and H. McCafferty  
Development Engineering

A method and apparatus are provided for applying an adhesive solution to the coal end of a cigarette by means of a precisely controlled liquid jet spray to bond shreds of tobacco in the cigarette end and to thereby reduce the amount of tobacco which falls out of the cigarette when shaken. The adhesive solution is sprayed by using a controlled continuous jet of the kind used in ink jet technology for the spraying of alpha-numeric character patterns. Electronic controls are employed to synchronize the formation of a series of droplets which are charged and deflected in prescribed paths to contact the coal end of the cigarette in a predetermined pattern. Circuits are provided to adjust the timing and phase of the charging mechanism to compensate for variations in the speed at which the cigarette is conveyed to a target area and for variations in the point of droplet formation.

See also CIP PM 1392

Schardt/F&N/Kennard

9-20-88 Filed in PTO; assignment recorded.

10-1-90 Notice of allowance.

12-13-90 Issue fee paid.

1-13-92 Checked status with F&N: PTO has lost file and is trying to locate it.

No corresponding foreign applications filed.

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2020109934

**PM 1283 - SN 585813**

(Filter Technology - Project Sauna) FILTER CIGARETTE

R. W. Newsome, A. S. Gergely, R. A. Thesing, W. T. Callaham, P. N. Gauvin, W. E. Claflin, and W. A. Nichols

Cigarette Technology

A filter cigarette comprising a tobacco rod and filter portion comprising a fluted tubular extrusion. The flutes are blocked intermediate the rod end and mouth end of the extrusion. The tobacco rod is circumferentially wrapped with a porous wrapper comprising a longitudinal band of perforations. The fluted tubular extrusion is attached with tipping paper to the tobacco rod. A mouthband and a rodband of perforations circumscribe the tipping paper. A rod of charcoal-impregnated filter material may abut the tubular extrusion.

Glenn/F&N/Horowitz

9-20-90 Filed in PTO; assignment recorded.

4-22-91 IDS filed.

4-26-91 1st action.

7-22-91 Amendment filed.

8-27-91 Notice of allowance.

11-6-91 Issue fee paid; amendment and formal drawings filed.

Corresponding foreign applications filed in Japan and the EPO designating all countries except Luxembourg.

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2020109935

PM 1301 CONT - SN 617395

*\*ISSUED\**

IMPROVED PINNED ROLLERS AND PROCESSES FOR MANUFACTURING  
FIBRILLATED FILMS

M. Hill  
FML/TTG/O'Brien

A roller for use in fibrillating oriented films of polyolefin materials  
having a plurality of pins projecting from the surface of the roller.

Schardt/F&N/Isackson  
11-20-90 Filed in PTO.  
4-14-92 Issued: 5104367

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2020109936



PM 1307 DIV - SN 665968

CRIMPED TEXTILE FIBERS AND STUFFER BOX APPARATUS AND METHODS FOR  
CRIMPING TEXTILE FIBERS

M. Hill and W. A. Nichols  
FML

An improved stuffer box used for crimping textile fibers, particularly fibrillated polyolefin films. The width of the stuffer box is related to the linear density of the fiber bundles to be crimped whereby there is one millimeter of width for each fiber bundle size in the range of from about 200 to about 750 denier. Pressure controlled hinged lid or fixed lid exit orifices may be employed. Also employed may be a distributing device for applying additive material to the textile fibers prior to crimping to enhance the crimping operation or to enhance the end use of the crimped fiber or both. Fibrillated polyolefin materials that are crimped in accordance with the invention are adapted for use in filter materials in smoking articles.

Schardt/F&N/Schuler/Ingerman

3-7-91 Divisional filed in PTO directed to claims 18-20 drawn to a crimped textile fiber.  
9-17-91 Reassigned to Matthews.  
9-20-91 Preliminary amendment filed.  
10-31-91 1st action rejecting all claims.  
1-31-92 Response filed.  
4-27-92 2nd action (response due July 27).

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2020109937

PM 1315 - SN 222961

(Delta - not used) SMOKING ARTICLE INCORPORATING A CERAMIC TUBE  
(DELTA)

C. Hayward, H. Lanzillotti, D. E. Merrill, E. B. Sanders, D. B. Losee, and J. Hearn

A smoking article in which a flavored aerosol is generated by heat transfer to a flavor bed from the combustion of a carbon heat source is provided wherein the carbon heat source and the flavor bed are contained within a non-combustible substantially cylindrical hollow ceramic sleeve. The article generates substantially no smoke, producing essentially only carbon dioxide, and has substantially no sidestream. The transfer of heat from the heat source is accomplished by convective and radiative heat transfer.

Schardt/F&N/Ingerman

7-22-88 Filed in PTO via Express Mail without formal papers.

7-3-90 Notice of allowance

9-10-90 Issue fee paid.

1-3-92 Status inquiry filed.

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2020109938

**PM 1322 CIP II - SN 571730**

(Delta/Sigma) SMOKING ARTICLE

M. A. Serrano, K. S. Houghton, H. V. Lanzillotti, E. B. Sanders, A. C. Lilly, C. R. Hayward, J. R. Hearn, and D. B. Losee

A smoking article in which a flavored aerosol is generated by heat transfer to a flavor bed from the combustion of a carbon heat source is provided. The article generates substantially no sidestream smoke. The transfer of heat from the heat source to the flavor bed is accomplished by convective and radiative heat transfer.

Schardt/F&N/Ingerman

8-24-90 Filed in PTO with IDS; assignment recorded.

5-31-91 Supplemental IDS filed.

1-3-92 2nd supplemental IDS filed.

12-31-91 1st action.

4-9-92 Response filed.

Corresponding foreign applications filed in Australia, Brazil, Canada, China, Finland, Japan, New Zealand, Norway, Taiwan, Thailand, USSR, and EPO designating all countries except Luxembourg.

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**PM 1323 - SN 792012**

(Delta) SMOKING ARTICLE

J. M. Ehrman, C. H. Goldsmith, E. C. Grollmund, H. V. Lanzillotti, and A. C. Lilly  
R&D

A smoking article that produces no visible sidestream smoke in which at least the carbon heat source and the tobacco flavor producing elements can be ejected from a reusable body of the smoking article.

Schardt/F&N/Panichi

11-13-91 Filed in PTO; assignment recorded.

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2020109939

PM 1325 - SN 266161

**\*ISSUED\***

SMOKING COMPOSITIONS CONTAINING A HEXAHYDROBENZOFURANONE  
FLAVORANT

K. F. Podraza  
Chemical Research

This invention provides smoking compositions which contain a 6-substituted hexahydrobenzofuranone flavorant additive. Under cigarette smoking conditions the flavorant additive enhances the aroma and flavor of the cigarette smoke.

Schardt/Depaoli  
11-2-88 Filed in PTO.  
5-19-92 Issued: 5114493

No corresponding applications/patents.

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2020109940

HOT ROTARY STAMPER APPARATUS AND METHODS FOR METAL LEAF STAMPING

Angel Amendola  
Alford Packaging

A continuous sheet of metal leaf advanced at a constant rate is moved at variable velocity through a rotary die stamper such that between stamps the metal leaf moves at a velocity which is slower than the velocity of a substrate web; but just prior to stamping the metal leaf is accelerated by contact between the metal leaf and a raised die rotating at the velocity of the substrate web so that when the stamp occurs the metal leaf is traveling at a velocity substantially equal to the velocity of the substrate web. Varying the velocity of the metal leaf has the effect of minimizing the distance the metal leaf travels between stamps which conserves consumption of the metal leaf. Separate means for accelerating the leaf prior to stamping and decelerating the leaf after stamping also may be provided.

Schardt/F&N/Isackson/Hubbard  
4-16-90 Filed in PTO; assignment recorded.  
5-26-92 Issued: 5115737

Corresponding foreign applications filed in Australia, Brazil, Canada, Japan, South Korea and the EPO designating all countries except Luxembourg.

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2020109941

PM 1328 DIV CONT - SN 782917

CONTAINER WRAPPER WITH INTEGRAL TEAR TAPE, AND METHODS AND APPARATUS FOR MAKING SAME

Angel Amendola (Alford Packaging) and Xuan M. Pham

An outer wrapper for a container which includes an integral tear tape. The tear tape is formed by cutting two sets of score lines extending partially through the thickness of the wrapper material. The tear tape can be patterned to conform to the parting line along which the container opens, including oblique segments, thus allowing the container to be opened without interference from the parts of the wrapper which remain in contact with the container subsequent to removal of the tear tape.

Schardt/F&N/Horowitz  
10-25-91 Filed in PTO.

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PM 1328 REEXAMINATION (US 4938363) SN 90/002669

Angel Amendola (Alford Packaging) and Xuan M. Pham

An outer wrapper for a container which includes an integral tear tape. The tear tape is formed by cutting two sets of score lines extending partially through the thickness of the wrapper material. The tear tape can be patterned to conform to the parting line along which the container opens, including oblique segments, thus allowing the container to be opened without interference from the parts of the wrapper which remain in contact with the container subsequent to removal of the tear tape.

Schardt/F&N/Horowitz  
3-13-92 Reexamination filed.

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2020109942

PM 1331 - SN 381762

(Delta/Sigma) THERMAL INDICATORS FOR SMOKING ARTICLES

F. M. Sprinkel, J. M. Campbell, and D. B. Losee  
Physical Research

Thermal indicators for non-combustion smoking articles which chemically react when heated to provide visual indication of temperature changes. The indicators comprise organic acids, sugars, or amines combined with sugars. The indicators are printed in a variety of patterns along the length of the smoking articles to show temperature changes and to indicate whether the smoking article is finished and should be discarded. Methods for applying the indicators to smoking articles by using print wheels or spray jets are also disclosed.

Schardt/F&N/deBlasi

- 7-18-89 Filed in PTO; assignment recorded.
- 9-25-90 Notice of allowance.
- 10-31-90 Issue fee paid.
- 3-14-91 Examiner called wanting to change "fluid" to "medium"--we agreed.
- 8-30-91 Status inquiry.
- 11-26-91 Ingerman authorized Millin by phone to make additional changes.

Corresponding foreign applications filed in Japan and East Germany.

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2020109943

**PM 1334 CIP - SN 696004**

**METHODS AND APPARATUS FOR OPTICALLY DETERMINING THE  
ACCEPTABILITY OF PRODUCTS**

K. A. Cox, H. M. Dante, and C. N. Harward, and R. J. Maher  
Physical Research

Improvements in methods and apparatus for optically determining  
whether or not a product has an acceptable appearance.

Related to PM 1514 and 1523

Glenn/F&N/Jackson

5-6-91 Filed in PTO; assignment recorded.

6-19-91 IDS filed.

1-28-92 Supplemental IDS filed.

3-19-92 1st action.

5-19-92 Amendment filed.

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2020109944



PM 1334 CONT - SN 634110

METHODS AND APPARATUS FOR OPTICALLY DETERMINING THE  
ACCEPTABILITY OF PRODUCTS

Kenneth A. Cox and Robert J. Maher

The appearance of a product is determined to be acceptable or unacceptable by computing a discriminant function or image from a plurality of two-dimensional images of products of the kind to be inspected. A two-dimensional image of the product is then formed and processed using the discriminant image to produce an output value which can be compared to a predetermined value used in computing the discriminant image. If the output value deviates from the predetermined value by more than a predetermined amount, the product has been found to have an unacceptable appearance.

Glenn/F&N/Jackson

12-17-90 Filed in PTO; assignment recorded.  
1-30-91 IDS filed.  
6-11-91 1st action.  
9-10-91 Amendment filed.  
1-28-92 Supplemental IDS filed.  
2-19-92 Supplemental amendment filed.  
2-20-92 Notice of abandonment for failure to pay issue fee.  
2-28-92 Petition to accept delayed issue fee (F&N never received the notice of allowance).  
4-23-92 Petition granted.

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2020109945

PM 1335CONT - SN 803174

(Beta) ELECTRICALLY POWERED LINEAR HEATING ELEMENT FOR A SMOKING DEVICE

S. C. Deevi and F. M. Sprinkel  
Physical Research

A heating element for use within a smoking device which non-combustibly heats a flavorant-containing material within the smoking device to produce an aromatic aerosol or vapor, which the smoker may inhale. More particularly, an electrically powered heating element having a plurality of discrete resistive heating segments, only one of which is active at any given time. In a preferred embodiment the heating element is contained within the smoking device so that the individual heating segments of the element are adjacent to a flavorant-containing material. As each segment of the heating element is provided with power, the flavorant-containing material adjacent to that segment is non-combustibly heated. This heating causes the flavorant-containing material to produce a flavored, aromatic aerosol or vapor, which the use of the device may inhale.

See also 1337

Glenn/F&N/Radulescu  
12-5-91 Filed in PTO.

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2020109946

PM 1336 - SN 639241

(Sigma) A METHOD FOR PRODUCING METAL CARBIDE HEAT SOURCES

S. C. Deevi, M. R. Hajaligol, and D. B. Losee  
Physical Research

A heat source comprising metal carbides and a method for preparing the same using reducing/carbidizing atmosphere is provided. The metal carbides making up the heat source have ignition temperatures that are substantially lower than conventional carbon particles normally used in carbonaceous heat sources, while at the same time provide sufficient heat to release a flavored aerosol, from a flavor bed for inhalation by the smoker. Upon combustion, the heat source produces substantially no carbon monoxide.

Schardt/F&N/Gross/Guiliano

1-9-91 Filed in PTO; assignment recorded.

11-13-91 IDS filed.

2-4-92 Formal drawings filed.

4-6-92 1st action (response due July 6--to Deevi for comment).

5-20-92 Guiliano to call Deevi direct to discuss action.

Corresponding foreign applications filed in Japan, Korea, and the EPO designating all countries except Luxembourg.

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2020109947

PM 1337 CONT - SN 741736

Glenn/F&N/Ingerman(Beta) FLAVOR GENERATING ARTICLE (FLAVOR DOT -  
MULTIPLE AG BED)

M. E. Counts, B. C. LaRoy, D. B. Losee, C. H. Morgan, U. Smith, F. M. Sprinkel,  
F. V. Utsch  
Physical Research

An article is provided in which a flavor generating medium is electrically  
heated to evolve inhale the flavors or other components in vapor or  
aerosol form. The article has a plurality of charges of the flavor  
generating medium which are heated sequentially to provide individual  
puffs.

Glenn/F&N/Ingerman  
8-7-91 Filed in PTO.  
8-28-91 Preliminary amendment filed.

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2020109948

**PM 1339 - SN 494598**

(Sigma/Delta) APPARATUS FOR CUTTING THIN-WALLED TUBES

Josef A. Boukal, Mike Braunshteyn, Jack C. Wheless, and Kathleen S. Whittle  
Engineering

An apparatus for precision cutting lightweight, thin-walled tubes that includes a means for transporting rough cut, thin-walled tubes from a source of supply past a first inspection station to determine if the tubes are crushed beyond a predetermined amount, a flaring station to flare the tube ends, an aligning station to align the tubes from cutting, and a cutting station to cut the tube into multiple sections. A selection means is provided that has second and third inspection means to determine if the tubes have been properly cut.

Schardt/F&N/Panichi

3-16-90 Filed in PTO.

1-31-92 Notice of allowance (fee due April 31); new Declaration and Assignment will be needed.

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**PM 1340 - SN 494761**

(Sigma/Delta) APPARATUS MAKING THIN LAMINATE STRUCTURES AND FORMING THE STRUCTURES INTO LIGHTWEIGHT, THIN-WALLED TUBES

Mike Braunshteyn, James E. Hall, Reginald W. Newsome, Jack C. Wheless, and Kathleen S. Whittle  
Engineering

An apparatus for laminating at least two strips of strip material and forming the laminate into lightweight, thin-walled tubular members that may be used in the construction of non-combustion smoking articles.

Glenn/F&N/Panichi

3-16-90 Filed in PTO.

1-27-92 Notice of allowance.

3-27-92 Issue fee paid.

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2020109949

PM 1345 - SN 444818

(Beta) FLAVOR DELIVERY ARTICLE (SINGLE AG BED)

M. E. Counts, M. R. Hajaligol, C. H. Morgan, U. Smith, F. M. Sprinkel, F. V. Utsch,  
Physical Research

Methods and apparatus for releasing flavor components from a flavor-generating medium using an electric heating element are provided. A non-combustion flavor-generating article uses electrical energy to power a heating element which heats tobacco or other flavorants. The flavor-generating medium is formed into a packed bed. Energy delivered to the heating element is regulated to maintain the flavor-generating medium at a relatively constant operating temperature to ensure a relatively constant release of flavor.

PM 1330, 1344, 1369 combined herewith

Glenn/F&N/Gulliano

12-1-89 Filed in PTO.

3-23-92 Notice of allowance (fee due June 23--Gulliano will pay fee).

4-9-92 Formal drawings filed.

4-14-92 Documents sent to add inventors.

5-12-92 Executed documents to Fish & Neave.

Corresponding foreign applications filed in Australia, Canada, Japan, South Korea, Norway, and the EPO designating all countries.

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2020109950

**PM 1347 - SN 556732**

**(Sigma) CATALYTIC CONVERSION OF CARBON MONOXIDE FROM  
CARBONACEOUS HEAT SOURCES**

S. C. Deevi, M. R. Hajaligol, D. S. Kellogg, and B. E. Waymack  
Physical Research

This invention relates to an improved carbonaceous heat source, particularly useful in a smoking article, comprising a carbon component and a metal species. Upon combustion, the metal species acts as a catalyst to convert substantially all of the carbon monoxide produced on combustion of the carbon component to a benign substances.

Schardt/F&N/Gross

7-20-90 Filed in PTO; assignment recorded.  
3-25-91 1st action received.  
7-23-91 Response and IDS filed.  
12-11-91 2nd action.  
1-7-92 Response filed.

Corresponding foreign applications filed in Japan, South Korea, and EPO designating all countries except Luxembourg.

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**PM 1350 DIV II - SN 759407**

**CONTAINER FOR ADDITIVE MATERIALS FOR SMOKING ARTICLES**

Gus D. Keritsis  
Cigarette Technology

A container for containing an additive material for modifying the characteristics of a smoking article.

Schardt/F&N/Panichi

9-13-91 Filed in PTO (covers claims 9-12).  
2-10-92 Notice of allowance.  
5-8-92 Issue fee paid.

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2020109951

PM 1353 - SN 732619

(Sigma) MANUFACTURING OF COMPOSITE HEAT SOURCES CONTAINING  
CARBON AND METAL SPECIES

S. C. Deevi, M. R. Hajaligol, H. V. Lanzillotti, A. C. Lilly, D. B. Losee, and M. L. Watkins  
Physical Research

Improved method for making a heat source comprising metal carbides are provided. the metal carbides heat sources have ignition temperatures that are substantially lower than conventional carbon particles normally used in carbonaceous heat sources, while at the same time provide sufficient heat to release a flavored aerosol, from a flavor bed for inhalation by the smoker. Upon combustion, the heat source produces substantially no carbon monoxide. The metal carbide is prepared by pre-forming the metal species/carbon source starting materials into a shape, and converting them to metal carbide in situ, without substantially altering the shape of the starting materials.

Schardt/F&N/Gross/Radulescu

7-19-91 Filed in PTO; assignment recorded.

12-13-91 IDS filed.

2-4-92 Formal drawings filed.

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2020109952



**PM 1360 - SN 699490**

(Sigma) A COMPOSITE HEAT SOURCE COMPRISING METAL CARBIDE, METAL NITRIDE, AND METAL

S. C. Deevi, S. Deevi, M. R. Hajaligol, K. H. Houghton  
Physical Research

Relates to heat sources comprising mixtures of metal carbide, metal nitride and metal. Upon combustion, the heat sources undergo a staged ignition process.

Schardt/F&N/Gross/Radulescu

5-13-91 Filed in PTO via Express Mail.

3-23-92 Notice of allowance (fee due June 23--Gross will pay).

Corresponding foreign applications filed in Japan, Korea and the EPO designating all countries.

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**PM 1365 - SN 365137**

(Paper Technology) MULTIPLE LAYER CIGARETTE PAPER FOR REDUCING SIDESTREAM SMOKE

S. D. Baldwin, R. M. Rogers, G. H. Bokelman, S. S. Tafur  
Chemical Research

The sidestream smoke associated with a cigarette or cigarette-like smoking article is reduced by wrapping the tobacco in a single sheet or paper having multiple layers.

Schardt/F&N/Miraglia

6-12-89 Filed in PTO; assignment recorded.

3-5-92 Notice of allowance (fee due June 5--Miraglia will pay).

Corresponding foreign applications filed in Japan, South Korea, Portugal, Turkey, South Africa, East Germany, Norway, Finland, and the EPO designating all countries.

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2020109953

PM 1370 - SN 567020

*\*ISSUED\**

CONDITIONING CYLINDER WITH FLIGHTS, BACKMIXING BAFFLES,  
CONDITIONING NOZZLES AND AIR RECIRCULATION

John C. Strang and Steve G. Muller  
Engineering

An apparatus and method for conditioning tobacco or other similar materials. In the preferred embodiment, a conditioning cylinder comprises a plurality of flights, backmixing baffles, and ejection baffles, all mounted to the interior wall of a cylinder. Rotation of the cylinder mixes and conveys the material. A spray nozzle assembly is positioned adjacent to the entrance of the cylinder and comprises spray nozzles. The spray nozzles are aimed at a plurality of predetermined target areas within the cylinder for directing a conditioning spray onto the material in the target areas. A recirculation conduit recirculates air exiting the cylinder and, before reentering the cylinder, combines the recirculated air with ambient air from fresh air make-up ports.

Glenn/F&N/A. Smith

8-14-90 Filed in PTO; assignment recorded.

4-14-92 Issued: 5103842

Corresponding foreign applications files in Australia, Brazil, Turkey and the EPO designating all countries except Luxembourg.

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2020109954

PM 1372 - SN 557123

## SCINTILLATION TUBE DYNAMIC CALIBRATION MONITOR AND FEEDBACK REGULATOR

David E. Sharpe  
Engineering

A scintillation tube dynamic calibration monitor and means for regulating the high voltage power supply to the detector are provided. In a preferred embodiment, a voltage boost current source provides an input voltage for a power out voltage regulator and for a +14.75 volt board regulator. The board regulator provides a voltage reference for various circuitry, and provides a voltage reference for coarse calibration and display calibration adjustment circuitry. The power voltage regulator provides the high voltage power supply drive signal. An error amplifier drives an integrator, which, in turn, drives a bargraph display. An optically-isolated output circuit drives an external alarm or relay. In an alternative embodiment, the pulse width of a detected circuit is linearized and converted to an analog control signal. The analog control signal drives conventional power supply control circuitry.

Schardt/F&N/A. Smith

7-23-90 Filed in PTO; assignment recorded.

4-7-92 Notice of allowance--fee will not be paid--CIP will be filed.

Corresponding foreign applications filed in Japan and EPO designating all countries except Luxembourg.

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2020109955

PM 1389 - SN 443636

(Delta/Sigma) CHEMICAL HEAT SOURCE COMPRISING METAL NITRIDE, METAL OXIDE, AND CARBON

M. R. Hajaligol, S. C. Deevi, S. D. Aripala, D. B. Losee, B. E. Waymack, and M. L. Watkins  
Physical Research

A chemical heat source comprising metal nitride, metal oxide and carbon, particularly useful in smoking articles, and methods of making the heat source are provided. The metal nitride of the heat source has an ignition temperature substantially lower than conventional carbonaceous heat sources, while at the same time provides sufficient heat to release a flavored aerosol from a flavor bed for inhalation by the smoker. Upon combustion the heat source produces virtually no carbon monoxide. The metal nitride is prepared by pre-forming the starting materials into a desired shape, and converting them to metal nitride in situ, without substantially altering the shape of the starting materials.

Schardt/F&N/Guilliano

11-29-89 Filed in PTO.

11-2-90 1st action.

11-5-91 IDS filed.

2-4-92 Formal drawings filed.

2-7-92 Examiner's communication sending reference for Action dated 11/2/90.

3-13-92 Deevi's comments on references sent to Guilliano.

Corresponding foreign applications filed in Japan, South Korea, and the EPO designating all countries except Luxembourg.

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2020109956

PM 1392 (CIP of PM 1279) - SN 731632

(Bonded Ends) DROPLET JET APPLICATION OF ADHESIVE OR FLAVORING  
SOLUTIONS TO CIGARETTE ENDS

Robert T. Gaudlitz, Hugh J. McCafferty, and J. M. Washington  
Development Engineering

A method and apparatus are provided for applying an adhesive or flavoring solution to the coal end of a cigarette by means of a precisely controlled liquid jet spray to bond shreds of tobacco in the cigarette end and to thereby reduce the amount of tobacco which falls out of the cigarette when shaken. Electronic controls are employed to synchronize the formation and charging of a series of droplets which are deflected in prescribed paths to contact the coal end of the cigarette in a predetermined pattern. Circuits are provided to adjust the timing and phase of the charging mechanism to compensate for variations in the speed at which the cigarette is conveyed to a target area and for variations in the timing of droplet formation.,

Schardt/F&N/Godziela

4-19-91 Letter to C. Smith: look into inventorship question raised by B.  
Fischer.

7-17-91 Filed in PTO.

\* \* \* \* \*

2020109957

PM 1393 CONT - SN 845741

(Paper Technology) WRAPPER FOR SMOKING ARTICLE (KH PO - SIDESTREAM REDUCTION)

G. H. Bokelman, S. D. Baldwin, S. Tafur, R. N. Ferguson, B. L. Goodman, and R. M. Rogers  
Chemical Research/Cigarette Technology

The sidestream smoke associated with a cigarette or cigarette-like smoking article is reduced by wrapping the tobacco in a paper wrapper having a burn retardant added thereto.

See also PM 1466

Glenn/F&N/Miraglia

3-2-92 Filed in PTO.

3-6-92 Supplemental IDS filed.

5-6-92 Notice of allowance (fee due August 6--Miraglia will pay).

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2020109958

PM 1396 (D554) - SN 700402

NOVEL ORGANIC ACIDS (LIQUID ION EXCHANGERS)

R. N. Ferguson, C. R. Howe, H. V. Secor, and J. Seeman  
Chemical Research

In a preferred embodiment this invention provides novel organic acids which exhibit utility as liquid ion exchangers suitable for use in solvent extraction.

Schardt/Depaoli

5-15-91 Filed in PTO; assignment recorded.  
10-24-91 1st action rejecting all claims.  
1-22-92 Response filed.  
4-10-92 2nd action - final (response due July 10--Depaoli drafting response).  
5-5-92 Seeman's comments faxed to Depaoli.  
5-14-92 Proposed response received.

Corresponding foreign applications filed in Japan and the EPO designating all countries.

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2020109959

**PM 1398 - SN 613013**

(Sigma/Delta) SMOKING COMPOSITIONS CONTAINING A MENTHOL-RELEASE ADDITIVE

W. Geoffrey Chan  
Chemical Research

In one embodiment, this invention provides a smoking composition which contains a flavorant additive which releases menthol under normal cigarette smoking conditions. The menthol-release additive is a mixture of menthyloxycarbonylglucose compounds which include more than 35 mole percent of 1-0-menthyloxycarbonyl-beta-d-glucopyranose and more than about 20 mole percent of 1,6-di-0-menthyloxycarbonyl-beta-d-glucopyranose.

Schardt/Depaoli/Giancola

11-15-90 Filed in PTO; assignment recorded.

11-12-91 1st action.

12-11-91 Amendment filed.

3-10-92 Notice of allowance (fee due June 10--Giancola will pay).

Corresponding foreign applications filed in Australia, Canada, Japan, and the EPO designating all countries except Luxembourg.

\* \* \* \* \*

2020109960



**PM 1399 - SN 765311**

**SMOKING COMPOSITIONS CONTAINING AN OXALATE FLAVORANT-RELEASE ADDITIVE**

W. Geoffrey Chan  
Chemical Research

In one embodiment this invention provides smoking compositions which contain a novel oxalate ester flavorant- release additive. Under cigarette smoking conditions, a combustible filler additive such as methyl 4-oxo-b-ionyl oxalate pyrolyzes and releases megastigma-5,7,9-trien-4-one as a natural flavorant component of the cigarette smoke.

Schardt/Depaoli  
9-25-91 Filed in PTO; assignment recorded.

\* \* \* \* \*

**PM 1399A - SN 822695**

**SMOKING COMPOSITIONS CONTAINING AN OXALATE FLAVORANT-RELEASE ADDITIVE**

W. Geoffrey Chan  
R&D

In one embodiment this invention provides smoking compositions which contain a novel oxalate ester flavorant- release additive. Under cigarette smoking conditions, a combustible filler additive such as methyl 2-pyrazinyl-2-propanyl oxalate or di(2-pyrazinyl-2-propanyl) oxalate pyrolyzed and releases 2-isopropenylpyrazine flavorant as a volatile component of the cigarette smoke.

Schardt/Depaoli  
1-21-92 Filed in PTO; assignment recorded.

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2020109961

**PM 1400 - SN 496584**

(Ambrosia) SMOKING COMPOSITIONS CONTAINING A FLAVORANT ADDITIVE

Kenneth F. Podraza  
Chemical Research

In one of its embodiments this invention provides smoking compositions which contain a benzofuranone flavorant additive as illustrated by cis 6-phenyl-3a,4,5,7a-tetrahydro-2(3H)-benzofuranone. Under normal cigarette smoking conditions, the benzofuranone additive volatilizes and enhances the flavor and aroma of the mainstream and sidestream smoke.

Schardt/Depaoli

3-21-90 Filed in PTO; assignment recorded.

3-10-92 Notice of allowance (fee due June 10--Giancola will pay).

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**PM 1401 (D548) - SN 660881**

(Ambrosia) SMOKING COMPOSITIONS CONTAINING AN ALDEHYDE-RELEASE SACCHARIDE ADDITIVE

W. Geoffrey Chan  
Chemical Research

This invention provides smoking compositions which contain a novel flavorant-release additive. Under cigarette smoking conditions, a combustible filler and/or paper wrapper additive such as 4'-formyl-2'-methoxyphenyl 4,6-O- cinnamylidene)-b-D-glucopyranoside pyrolyzes into cinnamaldehyde and vanillin flavorants as volatile components of the cigarette smoke.

Schardt/Depaoli/Giancola

2-26-91 Filed in PTO; assignment recorded.

3-4-92 IDS and preliminary amendment filed.

3-18-92 Notice of allowance (fee due June 18).

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2020109962

PM 1404 - SN 550177

STRING DOFFER MECHANISM

George S. Bosell, Joao C. A. Gomes, and Joseph P. Maciejczyk  
Engineering

A mechanism for removal of contaminants from a stream of material having a plurality of rotatable cylindrical doffer elements each having flights supplied with cleaning means thereon mounted substantially parallel to one another within a frame. The mechanism is provided with means for adjusting both the positions along the frame of the doffer elements as well as the vertical elevation of the doffer elements with respect to the frame.

Glenn/F&N/Panichi

7-9-90 Filed in PTO.

9-10-90 Assignment recorded.

10-3-90 IDS filed.

3-18-91 1st action.

6-18-91 Response and formal drawings filed.

1-21-92 2nd action (response due April 21).

Corresponding foreign applications filed in Argentina, Brazil, Japan, South Korea, Turkey and the EPO designating all countries except Luxembourg.

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2020109963

PM 1406 (D546) - SN 710324

METHOD AND APPARATUS FOR DISPENSING A CONSTANT CONTROLLED  
VOLUME OF ADHESIVE

B. C. Kiernan, B. A. Semp, D. M. Driscoll, and D. L. Bilunas  
Engineering

Relates to controlling adhesive flow through a nozzle such that a consistent, continuously controlled volume of adhesive is dispensed on a moving substrate independent of other system and environmental parameters.

Glenn/F&N/Krasnow

6-4-91 Filed in PTO with IDS; assignment recorded.  
10-30-91 Restriction requirement.  
11-26-91 Response filed.  
1-24-92 Foreign filing recommendation requested.  
4-14-92 1st action rejecting all claims (response due July 14--  
Krasnow drafting response).

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2020109964

PM 1411 - SN 806691

## AUTOMATED BOX BLANK HANDLING SYSTEM

D. Brookman, E. Grollimund, G. Grollimund, and S. F. Spiers  
Engineering

A system is provided for packing, shipping and automated unloading of stacks of box blanks so as to minimize damage to the box blanks and facilitate the insertion of the box blanks into an automated packaging machine. A fitted shipping case, filled with stacks of box blanks and upper and lower inserts, has a plurality of holes in its upper and lower flaps for cooperating with an automated unloading machine. The inserts enclosed in the shipping case minimize damage due to shifting of the box blank stacks, provide added resistance against case failure during transit, and cooperate with the automated unloading machine to facilitate removal of the box blank stacks from the shipping case. The automated shipping case unloading machine features a stationary case gripping portion, an upper portion for opening the shipping case and removing the upper insert, and a plurality of carriage assemblies for lifting the stacks of box blanks out of the shipping case and conveniently presenting the stacks to the human operator.

Glenn/F&N/Pisano

12-6-91 F&N instructed to file DIV of PM 1410 on claims 1-5; however they did not get it on file in time so it won't be a true divisional.

12-12-91 Filed in PTO.

3-16-92 Assignment recorded.

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2020109965

**PM 1412 - SN 613160**

PUTRESCINE N-METHYLTRANSFERASE, RECOMBINANT DNA MOLECULES,  
ENCODING PUTRESCINE N-METHYLTRANSFERASE, AND TRANSGENIC  
TOBACCO PLANTS WITH ALTERED NICOTINE CONTENT

H. Y. Nakatani and V. S. Malik  
Biochemical Research

There is provided highly purified tobacco putrescine N-methyltransferase, a process for its purification, and production of PMT DNA sequence. The purification process includes the step of applying a tobacco root extract to an anion exchange medium and specifically eluting putrescine N-methyltransferase with an elution buffer comprising putrescine.

Glenn/F&N/Creason

11-14-90 Filed in PTO.

1-28-91 Assignment recorded.

2-20-92 Restriction requirement.

2-27-92 Response filed, Group I (Claims 1-15) elected.

4-25-92 IDS filed.

5-8-92 1st action (response due August 8).

Corresponding foreign applications filed in Brazil, Japan, Turkey, and the EPO designating all countries except Luxembourg.

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2020109366

PM 1413 (D539, D569, D643, D644) - SN 757346

THERMALLY-REGULATED FLAVOR GENERATOR

S. C. Deevi, M. R. Hajalicol, C. H. Morgan, W. A. Nichols  
Tobacco Fundamentals

Relates to a smoking article in which the delivery of flavor to the consumer during each individual puff of the article can be precisely controlled and regulated. As a result, the smoking article is capable of producing a constant quality of flavor delivery from the first to last puff of the article.

Schardt/F&N/Gross/Radulescu  
9-10-91 Filed in PTO.

\* \* \* \* \*

PM 1414 - SN 789979

(Delta/Sigma) FRACTIONATED PLANT EXTRACTS USEFUL AS FLAVORANTS  
AND ENHANCERS THEREOF AND METHODS FOR PREPARING AND USING THE  
SAME

Wynn R. Raymond and R. W. Hale  
R&D

Relates to tobacco extracts fractionated to be essentially nicotine-free  
and to processes for making and using the same.

Glenn/F&N/Hall  
11-12-91 Filed in PTO; assignment recorded.  
2-14-92 F&N instructed to proceed with IDS.

\* \* \* \* \*

2020109367

PM 1415 - SN

(Cast Sheet) RECONSTITUTED TOBACCO SHEETS AND METHODS FOR PRODUCING AND USING THE SAME

G. Gellitaly  
R&D

Relates to reconstituted tobacco sheets having improved quality and survivability due to an optimization of a mean tobacco particle size and a reduction in the air content of the slurry prior to casting the slurry into tobacco sheets.

Glenn/F&N/McCabe

4-9-92 Filed in PTO without signature.

5-13-92 Inventor's comments sent to F&N--would preliminary amendment be in order?

\* \* \* \* \*

2020109968



PM 1418 - SN 565127

*\*ISSUED\**

(Ambrosia) SMOKING COMPOSITIONS CONTAINING A VANILLIN-RELEASE  
ADDITIVE

Y. Houminer, K. Podraza, and E. Southwick  
Chemical Research

This invention provides smoking compositions which contain a novel vanillyl 5-hydroxyester flavorant-release additive. Under cigarette smoking conditions, a combustible filler and/or paper wrapper additive such as 4'-formyl-2'-methoxyphenyl 5-hydroxy-2-isopropylhexanoate pyrolyzes into vanillin and 2-isopropyl-5-hydroxyhexanoic acid delta lactone flavorants as volatile components of the cigarette smoke.

Schardt/Depaoli

8-10-90 Filed in PTO; assignment recorded.

6-9-92 Issued: 5120368.

Corresponding foreign patents/applications in Canada, Japan, and the EPO designating all countries except Luxembourg.

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2020109969

**PM 1419 - SN 537775**

(Ambrosia) SMOKING COMPOSITIONS CONTAINING A VANILLIN-RELEASE  
BETA-HYDROXYESTER ADDITIVE

G. Chan, Y. Houminer, J. Paine, and K. Podraza,  
Chemical Research

This invention provides smoking compositions which contain a novel beta-hydroxyester flavorant-release additive. Under cigarette smoking conditions, a combustible filler and/or paper wrapper additive such as ethyl 3-hydroxy- 3-(4'-hydroxy-3'-methoxyphenyl)-2-phenylpropanoate pyrolyzes into vanillin and ethyl phenylacetate flavorants as volatile components of the cigarette smoke.

See also PM 1464

Schardt/Depaoli

6-13-90 Filed in PTO.

2-25-92 Notice of allowance.

4-28-92 Issue fee paid.

Corresponding foreign patents/applications in Canada, Japan, and the EPO designating all countries except Luxembourg.

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**PM 1420DES - SN 627966**

(Ambrosia) ODORLESS ASHTRAY

R. W. Newsome

Cigarette Technology

Design for an odorless ashtray.

Glenn/F&N/Solomon

12-17-90 Filed in PTO.

3-3-92 IDS filed.

3-11-92 Formal drawings filed.

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2020109970

PM 1425 (D592) - SN 723164

(Manufacturing) RESTRUCTURED TOBACCO DRYER

John N. Hickie  
Engineering

Apparatus and method in which reconstituted tobacco sheet is produced by applying a tobacco containing slurry to a heated cylindrical dryer.

Glenn/F&N/Brook

6-28-91 Filed in PTO.  
1-24-92 Foreign filing recommendation requested.  
2-26-92 IDS filed.  
3-9-92 Office Action - Restriction requirement.  
3-31-92 Instructed F&N to elect Process Claims.  
4-6-92 Response filed, Group II elected.

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2020109971

**PM 1426 - SN 679756**

(Manufacturing) UNIVERSAL MATERIAL CARRIER AND OVERHEAD MONORAIL SYSTEM

Gary E. Grollmund and Hannes K. Junginger  
Engineering

Apparatus and method for transporting a variety of cigarette and packaging components to the manufacturing and packaging areas of a cigarette manufacturing and packaging operation.

Glenn/F&N/Brook

4-3-91 Filed in PTO.

7-15-91 Assignment recorded.

10-25-91 1st action rejecting all claims.

4-27-92 Response filed.

Corresponding foreign applications filed in Japan and the EPO designating all countries.

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**PM 1427 (D595) - SN 746746**

(Manufacturing) TRASH REMOVAL APPARATUS AND METHOD

R. A. Arents and Everett C. Patterson  
Engineering

Apparatus and method for separating loose shreds of tobacco and large and small trash from rejected cigarettes.

Schardt/F&N/Brook

8-19-91 Filed in PTO.

4-30-92 IDS filed.

5-6-92 1st action.

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2020109972

**PM 1429 - SN 614620**

(Paper Technology - Project Tomorrow - "Daubing Dandy") PAPER HAVING  
CROSSDIRECTIONAL REGIONS OF VARIABLE BASIS  
WEIGHT

J. Allen, G. H. Bokelman, N. Gautam, D. Kraske, J. L. Myracle, R. M. Rogers,  
and E. B. Sanders

This invention refers to a paper having cross directional regions having increased basis weight. The paper of this invention is especially useful as a wrapping material for a smoking article. The paper may be produced by depositing additional material onto a moving base web in a papermaking machine. The additional material is deposited by means of a rotating drum containing a plurality of slits through which the additional material passes.

Glenn/F&N/Horowitz

11-16-90 Filed in PTO.

7-19-91 Preliminary amendment filed.

11-12-91 Assignment recorded.

2-6-92 1st action (response due May 6--Radulescu drafting response).

2-25-92 IDS filed.

3-4-92 Action to Baldwin and Sanders for review.

3-17-92 English translation for review --- to inventors.

Corresponding foreign applications filed in Australia, Canada, Finland, Norway, Japan, and the EPO designating all countries except Luxembourg.

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**PM 1429/1479 CIP - SN**

(Paper Technology - Project Tomorrow - "Daubing Dandy") PAPER HAVING  
CROSSDIRECTIONAL REGIONS OF VARIABLE BASIS  
WEIGHT

Schardt/F&N/Radulescu  
File in PTO.

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2020109973

PM 1430 - SN 565126

(Ambrosia) SMOKING COMPOSITIONS CONTAINING A VANILLIN-RELEASE  
ADDITIVE

R. Southwick  
Chemical Research

This invention provides smoking compositions which contain a novel di-  
vanillyl ester flavorant-release additive. Under cigarette smoking  
conditions, a combustible filler and/or paper wrapper additive such as di-  
ethylvanillyl oxalate pyrolyzes and releases ethylvanillin as a volatile  
flavorant component of the cigarette smoke.

Schardt/Depaoli

8-10-90 Filed in PTO; assignment recorded.

3-9-92 Notice of allowance (fee due June 9--Giancola will pay).

Corresponding foreign patent/applications in Canada, Japan, and the EPO  
designating all countries except Luxembourg.

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2020109974

PM 1431 - SN 656306

(Filter Technology/CO Removal) CONVERSION OF CARBON MONOXIDE USING  
MIXED TRANSITION METAL OXIDE CATALYSTS

R. L. Augustine and S. Tanielyan (Seton Hall)  
Physical Research

This invention relates to improved catalysts for the oxidation of carbon monoxide and methods of preparing these catalysts. The catalysts of this invention are prepared using a sequential precipitation process which generates catalysts that contain substantially layered metal oxides, both supported and unsupported, and, in some embodiments of the invention, a noble metal or mixture of noble metals layered on the metal oxides. These catalysts are particularly useful in smoking articles.

See also PM 1676

Glenn/F&N/DeFranco/Loring

2-15-91 Filed in PTO.

9-13-91 IDS filed.

10-21-91 1st action.

12-26-91 Assignment recorded.

2-21-92 Response filed.

4-15-92 2nd action (response due July 15)--to inventors for comment.

Corresponding foreign applications filed in Canada, Finland, Norway, Japan, Korea, and the EPO designating all countries except Luxembourg.

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2020109975

**PM 1432CONT - SN 830998**

(Manufacturing/Cartier 10) PROCESS FOR PACKAGING CIGARETTES

J. Adams, J. D. Barnes, R. C. Donoff, H. H. Fishburne, V. L. Maclauchlan, X. M. Pham, L. L. Pitt, S. R. Rinehart, J. Tomanovits, and D. C. Wilder  
Engineering

A process for efficiently packaging cigarettes into an oval pack having plastic end caps is provided.

Glenn/F&N/Wildes

2-5-92 Filed in PTO.

3-10-92 F&N instructed by phone to file the 131 Affidavit of PM 1477 and/or Preliminary Amendment ASAP.

3-23-92 1st action rejecting all claims (response due June 23).

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**PM 1432 CONT CIP- SN**

(Manufacturing/Cartier 10) PROCESS FOR PACKAGING CIGARETTES

J. Adams, J. D. Barnes, R. C. Donoff, H. H. Fishburne, V. L. Maclauchlan, X. M. Pham, L. L. Pitt, S. R. Rinehart, J. Tomanovits, and D. C. Wilder  
Engineering

A process for efficiently packaging cigarettes into an oval pack having plastic end caps is provided.

Glenn/F&N/Ingerman

Filed in PTO.

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2020109976



PM 1434 (D620) - SN 802339

(Manufacturing) INNERFRAME FOR PACKING CIGARETTES OF VARIABLE DIAMETER IN A STANDARD WIDTH PACK

Jack R. Colgan, Howard H. Fishburne, Xuan M. Pham,  
Engineering

Relates to an innerframe inserted into a cigarette box for securely retaining a bundle of cigarettes of smaller than standard size circumference in a standard size cigarette box.

See also D623

Schardt/F&N/Panichi

12-4-91 Filed in PTO; assignment recorded.

5-4-92 Notice of allowance (fee due August 4--Panichi will pay).

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2020109977

PM 1435 - SN 567810

(Manufacturing/Cartier 10) METHOD WHERE EXPOSED FOIL ON TOP OF CIGARETTE BUNDLE IS FLAT WITH NO APPARENT FOLDS

John D. Barnes, Howard H. Fishburne, Xuan M. Pham, and Linwood L. Pitt  
Engineering

A method of folding foil around cigarette bundles where the exposed foil on the top of the bundle is flat with no apparent folds. The smooth flat appearance is created by forming the top folds prior to forming the side folds. Notches cut into the foil by which folding stresses on the outermost cigarettes in the bundle are reduced are also provided.

Glenn/F&N/Panichi

8-15-90 Filed in PTO; assignment recorded.

12-13-90 IDS filed.

5-3-91 Restriction requirement.

7-24-91 1st action.

11-22-91 Response filed.

1-9-92 Second supplemental IDS filed.

1-8-92 2nd action - final.

4-8-92 Response filed.

4-20-92 Advisory action.

Corresponding foreign applications filed in Australia, Japan, South Korea and the EPO designating all countries except Luxembourg.

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2020109978

PM 1437 - SN 567808

(Manufacturing/Cartier 10) CIGARETTE BOX ENDCAP INSERTION METHOD  
AND APPARATUS

Vic Maclauchlan  
Engineering

This disclosure is for a method and apparatus for inserting one or more endcaps into the ends of a cigarette box. The box is placed on a slide in the apparatus and the slide moves along a predetermined path through the apparatus. Along the path, the box is aligned and pushers push endcaps into the end of the cigarette box. A uniform box with a desired cross-sectional shape is produced.

Glenn/F&N/Krasnow

8-15-90 Filed in PTO; assignment recorded.

3-12-92 Notice of allowance (fee due June 12).

Corresponding foreign applications filed in Australia, Japan, South Korea, and EPO designating all countries except Luxembourg.

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2020109979

PM 1438 - SN 567806

(Manufacturing/Cartier 10) METHOD AND APPARATUS FOR  
ULTRASONICALLY BONDING ENDCAPS TO A CONTAINER OF DISSIMILAR  
MATERIAL

Jonah Adams and Steve Rinehart  
Engineering

A method and apparatus are provided for ultrasonically bonding endcaps to a food or tobacco product container comprised of a material dissimilar from the endcaps. Ultrasonic vibration is applied to the joint between the container and the endcaps, which includes a strip of preapplied adhesive, so that the adhesive partially melts. The partially melted adhesive quickly resolidifies, providing a durable bond without the disadvantageous and time consuming use of wet glues. The apparatus includes a pair of oppositely mounted ultrasonic devices, a controller associated with each ultrasonic device, and a general purpose computer programmed to synchronize and monitor the controllers.

Glenn/F&N/Pisano

8-15-90 Filed in PTO.

4-15-92 Notice of allowance (fee due July 15).

Corresponding foreign applications filed in Australia, Japan, South Korea, and EPO designating all countries except Luxembourg.

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2020109380

PM 1442 (D605) - SN 688154

(Delta/Sigma) THERMALLY RELEASABLE GEL-BASED FLAVOR SOURCE FOR  
SMOKING ARTICLES

W. A. Nichols, P. D. Lieberman, and M. E. Toerne  
Tobacco Fundamentals

A gel-based tobacco-containing thermally releasable flavor source that  
provides the sensations associated with the smoking of tobacco without  
the burning of tobacco.

Schardt/F&N/Gross/Radulescu

4-19-91 Filed in PTO; assignment recorded.

11-5-91 IDS filed.

5-4-92 1st action.

Corresponding foreign applications filed in Japan and the EPO designating  
all countries.

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2020109981

PM 1445 - SN

CIGARETTE INSPECTION DEVICE

B. M. Evani, H. C. Longest, J. S. Osmalov  
R&D

Relates to an apparatus and method for the inspection of cigarettes using a rolling drum and a rolling block to expose nearly 360 degrees of a cigarette for a machine vision system to view cigarettes at two positions.

See also PM 1470

Schardt/F&N/Krasnow  
Filed in PTO.

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PM 1446 - SN 657677

(Robotics) AUTOMATIC TESTING OF A PLURALITY OF SMOKING ARTICLES

Wayne B. Adkins, C. T. Higgins, H. J. McCafferty, E. L. Moss, and J. I. Roncero  
Development Engineering

A computer-controlled robotic automatic test station that measures a selected number of a plurality of physical parameters of smoking articles and/or smoking article components in a selected sequence.

Schardt/F&N/Isackson  
2-19-91 Filed in PTO.  
10-11-91 IDS filed.  
4-24-92 1st action (response due July 24).

Corresponding foreign applications filed in Japan and the EPO designating all countries except Luxembourg.

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2020109982

PM 1447 - SN 657681

(Robotics) METHOD AND APPARATUS FOR MEASURING SMOKING ARTICLES

W. Adkins, C. Higgins, and H. McCafferty  
Development Engineering

Method and apparatus for measuring the length of a smoking article for use in an automated test station for measuring physical parameters of smoking articles. The length is measured using an electronic linear array camera to obtain the length dimension along a first axis as the smoking article is advanced from one position to another. The length may be measured while the article is moving or stopped. The length may be measured directly, or indirectly by measuring the length from a selected point.

Schardt/F&N/Isackson  
2-19-91 Filed in PTO.  
10-11-91 IDS filed.

Corresponding foreign applications filed in Japan and the EPO designating all countries except Luxembourg.

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2020109983

**PM 1448 - SN 657523**

(Robotics) APPARATUS AND METHOD FOR REMOVING TOBACCO SHREDS FROM  
A CIGARETTE FILTER

Wayne B. Adkins and Jose I. Roncero  
Development Engineering

An automated method and apparatus for removing tobacco shreds from the end of a smoking article filter severed from a tobacco containing smoking article, such as a cigarette. A mechanical arm of a robot, having opposing gripping members, is used to grip and insert the filter into the deshredding apparatus whereupon a deshredding tool is rotated to contact, and a stream of high-pressure air is simultaneously directed at, any tobacco shreds remaining in the tobacco end of the severed filter portion. An exhaust removes the loosened tobacco shreds. The robot then removes the filter from the apparatus. The filter is then ready to be subjected to characterization tests.

Schardt/F&N/Krasnow

2-19-91 Filed in PTO.

3-25-92 Notice of allowance (fee due June 25).

4-28-92 Krasnow instructed to pay fee.

Corresponding foreign applications filed in Japan and the EPO designating all countries except Luxembourg.

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2020109984



PM 1449 - SN 657657

(Robotics) APPARATUS AND METHOD FOR GRIPPING A CIGARETTE

Wayne B. Adkins and Jose I. Roncero  
Development Engineering

Method and apparatus for gripping cigarettes of different dimensions with the same two fingers of a robotic device.

Schardt/F&N/Ingerman/Radulescu

2-19-91 Filed in PTO.

10-11-91 IDS filed.

11-21-91 1st action.

2-12-92 Response filed.

3-24-92 2nd action - final (response due June 24).

4-29-92 Action to inventors for review.

Corresponding foreign applications filed in Japan and the EPO designating all countries except Luxembourg.

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2020109385

PM 1450 - SN 657436

(Robotics) APPARATUS AND METHOD FOR CUTTING A CIGARETTE

W. Adkins, E. L. Moss, and Jose Roncero  
Development Engineering

An automated method and apparatus for cutting a smoking article, such as a cigarette, into sections and removing a component, such as the filter section, from the article. A mechanical arm of a robot having opposing gripping members is used to grip and insert the article into the cutting apparatus whereupon a piston rod causes a blade edge to sever the article just above the filter. After the robot removes the filter from the apparatus, the filter is then ready to be subjected to characterization tests.

Schardt/F&N/Isackson/Radulescu

2-19-91 Filed in PTO.

10-11-91 IDS filed.

4-2-92 1st action (response due July 2--Radulescu drafting response).

Corresponding foreign applications filed in Japan and the EPO designating all countries except Luxembourg.

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2020109386

PM 1452 DES - SN 622803

(Design) CIGARETTE PACK DISPLAY CONTAINER

David G. Bragin and Frederick M. Della Crosse  
New Products Group

A cigarette box container. The container includes a plural-sided body with a transparent plastic face protruding on each side thereby providing a pocket for receipt of a cigarette box. Cigarette boxes placed in each pocket can be viewed through each face. The top wall is protruded above the top edge of the side walls to assist in any stacking of the cigarette box containers, if such stacking is desired.

See also PM 1452

Glenn/F&N/Farber

12-5-90 Filed in PTO.

4-1-92 Notice of allowance (issue fee due July 1--Farber will pay).

5-12-92 Farber instructed to pay fee.

Corresponding foreign applications filed in Japan, South Korea, and the EPO designating all countries except Luxembourg.

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2020109987

**PM 1458 - SN 794528**

(Sigma) METHOD AND APPARATUS FOR CUTTING, FORMING AND INSERTING CUPS INTO TUBES

Terry Babbitt, Mike Braunshteyn, A. J. Gillespie, Don H. Jones, Bill J. Keen, Robert H. Raynor, and Ray Ritt, and R. E. Talley  
Engineering

Relates to a method and apparatus for cutting aluminum disks out of a continually advancing strip of aluminum, forming the disks into cups, and maneuvering and inserting the cups into the ends of tubes.

Glenn/F&N/Horowitz

11-19-91 Filed in PTO; assignment recorded.

4-28-92 Notice of allowance (fee due July 28--Horowitz will pay fee).

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2020109988

LAMINAR FLOW DUST SHIELD FOR WIDE ANGLE LENSE

N. Rowe and W. R. Sweeney  
Engineering

Apparatus for preventing the deposition of dust on a surface, for example, the transparent surface of an optical instrument, is provided. The apparatus includes a tube and a hollow porous frustrum. The surface is placed inside the tube. The small opening of the diffuser frustrum is placed adjacent to the surface, and the large opening of the diffuser frustrum is sealed against the inner wall of the tube. Compressed gas is flooded into the tube, passes through the diffuser frustrum and sets up a laminar gas flow away from the surface, thus preventing the deposition of dust on the surface.

Glenn/F&N/Horowitz

2-26-91 Filed in PTO; assignment recorded.

5-19-92 Issued.

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2020109989

PM 1460 (D636) - SN 642295

APPARATUS AND METHODS FOR CUTTING RODS INTO LENGTHS FOR  
CIGARETTE MAKERS

M. A. Church, M. H. Dalton, Sherman C. Roane  
Engineering

Relates to improvements in cutting a continuous rod of material into lengths, particularly cutting an advancing cigarette rod into uniform lengths.

Glenn/F&N/Schuler

1-17-91 Filed in PTO; assignment recorded.  
4-22-91 IDS filed.  
1-4-92 Restriction requirement.  
1-16-92 Corrections forwarded to Matthews for drawings.  
3-5-92 Response filed - Group I (claims 1-16) elected.

Corresponding foreign applications filed in Japan and the EPO designating all countries except Luxembourg.

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2020109390

PM 1464 (D642) - SN 688436

(Ambrosia) SMOKING COMPOSITIONS CONTAINING A VANILLIN-RELEASE  
ADDITIVE

W. G. Chan, H. Grubbs, Y. Houminer, K. Podraza, and T. Sanders  
Chemical Research

This invention provides smoking compositions which contain a novel vanillin flavorant-release additive. Under cigarette smoking conditions, a combustible filler and/or paper wrapper additive such as ethyl 3-(4'-butoxycarbonyloxy-3'-methoxyphenyl)-3-hydroxy-2-phenylpropanoate pyrolyzes into vanillin and ethyl phenylacetate flavorants as volatile components of the cigarette smoke.

Schardt/Depaoli/Giancola  
4-22-91 Filed in PTO; assignment recorded.

Corresponding foreign applications filed in Canada, Japan, and the EPO designating all countries.

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2020109991

**PM 1466 CONT - SN 845738**

(Paper Technology) WRAPPER FOR A SMOKING ARTICLE

S. D. Baldwin, G. H. Bokelman, B. L. Goodman, B. L. Floyd, and S. S. Tafur  
Chemical Research

The sidestream smoke associated with a cigarette or cigarette-like smoking article is reduced by wrapping the tobacco in a paper wrapper having an additive, such as an organic acid, an acidic salt or an organic acid in combination with an acidic salt added thereto.

See also PM 1444, 1494, 1441, and 1511

Glenn/F&N/Miraglia  
3-2-92 Filed in PTO.

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**PM 1469DIV - SN 664878**

OVERWRAP INSERT

D. A. Thomas, R. M. O'Connell, R. C. Reinert, and J. M. Gillin  
Alford Packaging

Paper stock is unwound, printed, folded, laminated and cut to form inserts. The laminated inserts are applied to an overwrap at an appropriately spaced interval. The resultant overwrap can then be wrapped around cigarette packs to provide each pack with an insert without slowing down production.

Schardt/Ostrolenk  
3-5-91 Filed in PTO.  
5-10-91 Restriction requirement.  
9-11-91 1st action.  
12-11-91 Amendment filed.  
3-24-92 2nd action - final (response due June 24).

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26660109392



**PM 1474DES (D634) - SN 675463**

(Beta) DESIGN - DELIVERY ARTICLE

E. S. Gee, A. C. Lilly, D. B. Losee, J. L. Myracle, Jr., C. H. Morgan, F. M. Sprinkel, F. V. Utsch, and J. F. Whidby

Glenn/F&N/Farber

3-25-91 Filed in PTO; assignment recorded.

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**PM 1475 CONT - SN 808640**

(Beta) FLAVOR GENERATING ARTICLE

F. V. Utsch, C. H. Morgan, F. M. Sprinkel, and D. B. Losee  
Physical Research

An article is provided in which a flavor generating medium is electrically heated to combustion to evolve inhalable flavors or other components in vapor or aerosol form. The article has a plurality of charges of the flavor generating medium which are heated sequentially to provide individual puffs.

Glenn/F&N/Radulescu

12-17-91 Filed in PTO.

3-26-92 Parent issued.

4-9-92 1st action rejecting all claims (response due July 9--  
Radulescu drafting response).

5-7-92 Examiner's 1st Office Action.

5-15-92 Action to inventors for comment.

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2020109993

PM 1476 - SN 625923

FILAMENTARY FLAVORANT-RELEASE ADDITIVE FOR SMOKING COMPOSITIONS  
CONTAINING A MENTHOL-RELEASE ADDITIVE

James M. Washington  
Development Engineering

In one embodiment this invention provides a cigarette product which contains a novel type of flavorant-release monofilament. The encapsulated flavorant is released under normal smoking conditions.

Schardt/Depaoli/Giancola

12-11-90 Filed in PTO; assignment recorded.  
8-5-91 1st action.  
8-13-91 Response filed.  
11-1-91 2nd action.  
12-4-91 Amendment filed.  
2-7-92 3rd action - FINAL.  
3-11-92 Response filed.  
3-19-92 Advisory action; Depaoli recommends filing continuation.

Corresponding foreign applications filed in China, Finland, Hong Kong, Japan, Korea, Norway, Panama, and the EPO designating all countries except Luxembourg.

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2020109994

PM 1476 CONT - SN

FILAMENTARY FLAVORANT-RELEASE ADDITIVE FOR SMOKING COMPOSITIONS  
CONTAINING A MENTHOL-RELEASE ADDITIVE

James M. Washington  
Development Engineering

In one embodiment this invention provides a cigarette product which contains a novel type of flavorant-release monofilament. The encapsulated flavorant is released under normal smoking conditions.

Schardt/Depaoli/Giancola  
4-28-92 Filed in PTO.

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PM 1476 DIV - SN 750939

FILAMENTARY FLAVORANT-RELEASE ADDITIVE FOR SMOKING COMPOSITIONS  
CONTAINING A MENTHOL-RELEASE ADDITIVE

James M. Washington  
Development Engineering

In one embodiment this invention provides a cigarette product which contains a novel type of flavorant-release monofilament. The encapsulated flavorant is released under normal smoking conditions.

Schardt/Depaoli/Giancola  
8-28-91 Filed in PTO (covers claims 6-11).  
4-20-92 Notice of allowance (fee due July 20).  
5-28-92 Giancola instructed to pay fee.

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2020109395

**PM 1477 CONT - SN 851227**

(Cartier) APPARATUS AND METHOD FOR FORMING HINGED TOP CIGARETTE BOX

Jonah Adams, John Tomanovits, and Duane Wilder  
Engineering

An apparatus for forming a hinged top cigarette box having a cross-section with one or more arcuate surfaces from a one piece blank is provided.

See also D689A&B

Glenn/F&N/Pisano

3-12-92 Filed in PTO.

5-7-92 Supplemental preliminary amendment filed.

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**PM 1479 (D680, D732) - SN 757243**

(Tomorrow) SMOKING ARTICLE WRAPPER FOR CONTROLLING BURN RATE AND METHOD FOR MAKING SAME

S. D. Baldwin, N. Gautam, K. S. Houghton, R. M. Rogers, J. L. Ryder  
Chemical Research

Relates to the control of the burn rate of a cigarette. The burn rate is controlled by the use of a paper wrapper to which regions of cellulosic material is applied and bonded. The cellulosic material is applied during a manufacturing step for the base paper wrapper, either off or on-line of the paper wrapper-forming machine.

Schardt/F&N/Gross

9-10-91 Filed in PTO; assignment recorded.

2-24-92 IDS filed.

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2020109396

PM 1480 (D612) - SN 648909

METHODS AND APPARATUS FOR FEEDING AND ASSEMBLING CYLINDRICAL  
ARTICLES FROM BULK AT HIGH SPEEDS

Bill J. Keen, R. B. Reich, and G. R. Scott  
Engineering

Methods and apparatus are provided for sorting and transporting cylindrical articles from a jumbled mass into a continuous stream of uniformly spaced articles aligned end-to-end. The methods include the steps of sorting, spacing and incorporating the spaced apart articles into component assemblies. The invention apparatus comprises a bowl feeder, a series of frictional, suction and lugged belt conveyors and a plurality of vacuum transfer and assembly drums. The apparatus includes means for regulating the sorting and transfer of the articles, for synchronizing transfer of the articles between apparatus subsystems, and for incorporating the articles into component assemblies.

Glenn/F&N/Pisano

11-31-91 Filed in PTO; assignment recorded.  
9-6-91 1st action.  
12-3-91 Response filed.  
2-14-92 Notice of allowance.  
4-15-92 Issue fee paid.

Corresponding foreign applications filed in Japan, Korea, and the EPO  
designating Germany, Italy, Netherlands,  
and GB.

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2020109997

**PM 1481 (D674) - SN 666926**

**(Beta) FLAVOR GENERATING ARTICLE**

C. H. Morgan and W. A. Nichols  
Physical Research

An article is provided in which a replaceable flavor generating medium is electrically heated by a set of permanent reusable heaters to evolve inhalable flavors or other components in vapor or aerosol form. Each heater heats only a portion of the available flavor generating medium so that a plurality of individual puffs of flavor-containing substance can be delivered sequentially to the consumer.

Glenn/F&N/Ingerman  
3-11-91 Filed in PTO with IDS; assignment recorded.

Corresponding foreign applications files in Australia, Canada, Japan, Norway, Korea, Turkey and the EPO.

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**PM 1483 CIP - SN 796631**

**(Filter Technology - Project Bold) CONCENTRIC SMOKING FILTER HAVING DISCRETE TOW AND WEB FILTER MEDIA**

C. W. Arterbery, W. T. Callaham, G. D. Keritsis, M. F. White  
Cigarette Technology

A concentric smoking filter in which one of the filter media is a fibrous tow, such as fibrous cellulose acetate tow, and one of the filter media is a web material, such as paper, is provided. The filter improves the taste, particularly, of ultra-light cigarettes.

Schardt/F&N/Ingerman  
11-22-91 Filed in PTO; assignment recorded.  
1-29-92 Supplemental IDS filed.

\* \* \* \* \*

2020109998

PM 1484 CIP - SN 766050

(Pack Coupon for Ft Box) CIGARETTE PACK WITH PARTLY REMOVABLE  
INNERFRAME

Donald H. Evers  
Engineering

A box-like cigarette pack has an innerframe which initially extends upward into what is normally a cutout in the front of the innerframe. This extension may then continue over the top of the cigarettes in the pack. The innerframe is weakened along the line which normally defines the cutout. When the consumer first opens the pack, he or she can remove the innerframe extension by tearing or separating along this line of weakening. Thereafter, the pack is like a normal pack. Additional information can be printed on the removable portion or portions of the innerframe. If provided, the portion which initially extends over the cigarette tops is a convenient size for use as a coupon or the like.

See also CIP 1581 and 1583

Glenn/F&N/Jackson

9-26-91 Filed in PTO; assignment recorded.

12-18-91 IDS filed.

1-23-92 1st action.

4-21-92 Response filed.

Combined with PM 1484II for foreign filing.

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2020109939

PM 1484 II - SN 659712

(Pack Coupon for Ft Box) CIGARETTE PACK WITH PARTIALLY REMOVABLE  
INNERFRAME

D. H. Evers  
Engineering

A box-like cigarette pack includes an innerframe with a front wall having an initially lower portion which is folded up so that it projects into the cutout conventionally provided in the upper portion of the innerframe front wall. All or part of the folded-up portion may be made readily removable by providing a line of weakness between the removable part and the remainder of the innerframe. The folded-up portion may be printed with any desired information and may form a coupon or coupon-like article when removed. Until removed, the folded-up portion may be somewhat of an impediment to easy removal of cigarettes, thereby prompting the consumer to remove it as intended.

See also PM 1538, 1581

Glenn/F&N/Jackson

2-25-91 Filed in PTO; assignment recorded.

3-23-92 Notice of allowance (fee due June 23--Horowitz will pay fee).

Corresponding foreign applications filed in Australia, Japan, and the EPO designating all countries except Luxembourg.

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2020110000



PM 1485 (D679) - SN 709023

(Beta-Related) CONTROL DEVICE FOR FLAVOR-GENERATING ARTICLE

F. M. Sprinkel  
Physical Research

A control device for electrically heated flavor generators. Sensors detect user lip activity associated with taking a draw and trigger heating of flavor-generating materials.

Glenn/F&N/Bergin

5-31-91 Filed in PTO.  
7-29-91 Assignment recorded.  
10-3-91 1st action.  
11-1-91 IDS filed.  
1-24-92 Foreign filing recommendation requested.  
3-3-92 Response, supplemental IDS, and formal drawings filed.  
3-27-92 Election requirement.  
4-13-92 Claims 2-10 and 12-13 elected.

Corresponding foreign applications filed in Australia, Canada, Japan, Norway, Korea, Turkey, and the EPO designating all countries.

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2020110001

PM 1486 CONT - SN 798846

SCORED INNERFRAME FOR HINGED LID CIGARETTE PACK

X. M. Pham  
Engineering

A hinged lid cigarette pack with rounded edges having an outer sleeve member within which is fitted an innerframe. The innerframe is provided with a front wall, side walls, rear walls and scored transitional panels interposed between the walls. The innerframe is bent about the score lines to conform closely to and fit within the contours of the rounded edges of the cigarette packs. The rear walls of the innerframe wrap around the cigarette bundle contained in the pack and frictionally engage the rear rounded corners of the pack, hinge and lid, thereby stabilizing the closed position of the hinged lid.

Glenn/F&N/Isackson/Panichi  
11-25-91 Filed in PTO with preliminary amendment.  
1-16-92 1st action.  
4-16-92 Response filed.

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2020110002

PM 1487 - SN 573884

APPARATUS AND METHOD FOR MAINTAINING CLOSED HINGED LID BOXES

X. M. Pham  
Engineering

A hinged lid box having an innerframe and rounded corners and means for maintaining the box substantially closed. The means includes a second front panel of material affixed in superposition to the interior front panel of the box lid to engage the innerframe of the box, providing increased structural support and frictional forces that retain the box in a closed position. The second panel of material has approximately the same width at the lid panel and a height that is greater than 50 percent and less than 100 percent of the height of the box lid. The panel also may have tabs extending from the panel into the rounded corners of the box so that the tabs are interposed between the innerframe corners and the lid corners when the lid is closed.

Glenn/F&N/Panichi

8-28-90 Filed in PTO; assignment recorded.

1-27-92 Notice of allowance.

3-27-92 Issue fee paid; formal drawings filed.

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2020110003

PM 1488 - SN 573883

## INTERLOCKING CLOSURE FOR HINGED LID BOXES

X. M. Pham  
Engineering

A hinged lid box having an innerframe and interlocking means for maintaining the box substantially closed. The interlocking means includes a panel of material including a tab that is secured to the inside of the front panel of the lid so that the tab is opposed to but not secured to the lid surface whereby the tab is disposed to pass inside the innerframe during closure. The innerframe is thus frictionally engaged by the tab and the opposing surface of the front panel of the lid to retain the lid closed. The tab may be formed by a slit in the panel of material and provided with a score line to facilitate bending the tab at the desired location to engage the innerframe. The tab also may be formed by cutting a notch in the panel, thereby providing a space between the tab and the panel from which the tab is cut. The notch may be provided with a configuration that facilitates inserting the tab behind the innerframe. Means for raising the tab a distance above the surface of the panel of material also may be provided. More than one tab may be used, preferably two tabs spaced apart and proximate to the front corners of the lid. The interlocking means is suitable for boxes having rounded corners.

Glenn/F&N/Panichi

8-28-90 Filed in PTO.

10-15-90 Assignment recorded.

11-30-90 Action - restriction requirement.

12-20-90 Response filed electing claims 1-43 and 55-58.

2-5-91 1st action.

7-5-91 Response filed.

9-20-91 2nd action.

12-19-91 Response filed.

1-28-92 3rd action allowing all claims; discussed by phone with Examiner; notice of allowance will be sent.

4-8-92 4th action (response due July 8).

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2020110004

**PM 1490 DES - SN 568317**

(Design) BOX HAVING VERGE LINES AND PINSTRIPING AT REGIONS ABOUT  
ROUNDED SIDE PORTIONS

R. L. Graham, X. M. Pham, Donald H. Evers, and F. M. Della Crosse  
Engineering

Design for a box having verge lines and pinstriping at regions about  
rounded side portions.

See also CIP PM 1524DES

Glenn/F&N/Isackson

8-15-90 Filed in PTO; assignment recorded.

1-8-92 IDS filed.

No corresponding foreign applications.

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**PM 1496 (D692) - SN 693656**

AIR VENTILATION SYSTEM

J. O. Lephardt and R. A. Tamol  
Analytical/Development Engineering

Relates to an air ventilation system for ventilating, heating, cooling or  
purifying areas such as rooms, houses, theaters, offices or any  
partitioned spaces. Comprises an air permeable carpet material placed  
over perforated flooring that is supported by a below-floor air  
distribution system and an in-ceiling air exhaust vent system.

Glenn/F&N/Brook

4-30-91 Filed in PTO; assignment recorded.

7-30-91 IDS filed.

Corresponding foreign applications filed in Australia, Canada, Japan,  
Korea, Singapore, and the EPO designating all countries.

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PM 1497 (D495) - SN 671010

## TAMPER-INDICATING WRAPPERS

R. J. Versic and D. D. Emerick (Ronald T. Dodge Co.)  
Chemical Research

A tamper-indicating wrapper in which multi-layer, laminated wrappers wherein a visible change between layers of the wrapper indicate that the wrapper has been punctured or that there has been tampering with the wrapper or its contents. The wrapper may be composed of two or more plies of packaging material such as films made from ethylene vinyl alcohol copolymer or from polyolefins such as polypropylene. In one construction, a transparent or translucent laminated wrapper becomes opaque upon rupture or puncture. In other constructions, a transparent or translucent wrapper becomes colored at the site of the rupture or puncture.

Schardt/F&N/Hintz

3-18-91 Filed in PTO; assignment recorded.  
5-28-91 IDS filed.  
2-4-92 Election requirement.  
2-12-92 Response.  
3-6-92 1st action.  
5-6-92 Draft response received.

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2020110006

**PM 1498 CONT - SN 777466**

(Paper Technology) PROCESS FOR MAKING WRAPPERS FOR SMOKING ARTICLES WHICH MODIFY THE BURN RATE OF THE SMOKING ARTICLE

J. L. Myracle  
Product Development

A process for making smoking article wrappers so as to modify the mass burn rate of the smoking article.

See also PM1368 and D741

Schardt/F&N/Hubbard

10-17-91 Filed in PTO.

12-23-91 Notice of allowance.

3-5-92 Issue fee paid; formal drawings filed.

3-20-92 Hubbard to petition to withdraw from issue and refile to get EP refs in record.

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**PM 1498 CONTII - SN 855491**

(Paper Technology) PROCESS FOR MAKING WRAPPERS FOR SMOKING ARTICLES WHICH MODIFY THE BURN RATE OF THE SMOKING ARTICLE

J. L. Myracle  
Product Development

A process for making smoking article wrappers so as to modify the mass burn rate of the smoking article.

Schardt/F&N/Hubbard

3-23-92 Filed in PTO.

5-13-92 References to F&N.

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2020110007

PM 1499 - SN 594325

MULTI-PACK FLIP-TOP CIGARETTE CARTON

Pam Moore, Nick Pitt, and Howard Vogt  
PM International

A paperboard blank is provided for a multi-pack, flip-top cigarette carton. The carton blank has front, back and side panels, top and bottom flaps, and dust flaps. These sections of the carton blank are separated by score lines in such a manner that the blank can be readily formed by conventional means to form a multi-pack, flip-top cigarette carton.

Glenn/F&N/Nix

10-9-90 Filed in PTO; assignment recorded.

3-17-92 Notice of allowance (fee due June 17--Nix will pay).

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PM 1501 (D694) - SN 805617

(BETA) LOW MASS RADIAL ARRAY HEATER FOR FLAVOR GENERATING ARTICLE

F. M. Sprinkel and E. C. Grollmund  
R&D

Relates to electric heating elements used to heat a flavor generating medium in a flavor generating article. Heating element is arranged in a radial array.

Glenn/F&N/Schoneman

12-12-91 Filed in PTO; assignment recorded.

1-21-92 IDS and formal drawings filed.

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2020110008



**PM 1511 - SN 800053**

**MAGNESITE-MAGNESIUM HYDROXIDE FILLERS FOR SMOKING ARTICLE WRAPPERS**

J. A. Fournier, A. G. Kallianos, J. B. Paine, K. F. Podraza and J. I. Seeman  
R&D

Novel fillers for smoking article wrappers comprising magnesite-magnesium hydroxide complexes. Smoking articles employing wrappers containing the fillers of the invention exhibit significantly reduced sidestream smoke.

See also PM 1441, 1444, 1466, and 1494

Glenn/F&N/Wilson  
11-27-91 Filed in PTO; assignment recorded.

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**PM 1513 (D677) - SN 826836**

**PINLESS BELT FEEDER**

B. Eugene Bailey and W. Randy Sweeney  
Engineering

Device for maintaining volumetric flow control of particulate and fiber-like materials. Particularly useful for transporting high moisture, finely sliced tobacco between storage and processing.

Glenn/F&N/Harnett  
1-28-92 Filed in PTO.

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2020110009

PM 1514 (CIP OF PM1334) - SN 661809

METHODS AND APPARATUS FOR OPTICALLY DETERMINING THE  
ACCEPTABILITY OF PRODUCTS

K. A. Cox, Henry M. Dante, and R. J. Maher

The acceptability of the appearance of objects such as consumer products is determined by forming an initial discriminant function as a composite of a relatively small number of images which are known to be acceptable. This initial discriminant function is then used to gather statistical information about how a first relatively large number of images compares to the initial discriminant function. Thereafter, this statistical information is used to select or aid in the selection of acceptable images from a second relatively large number of images, and the images selected as acceptable are used to refine the discriminant function. The refined discriminant function is then used (e.g., during actual product inspection) to determine which objects have an acceptable appearance and which do not.

Related to PM 1334 and 1514

Glenn/F&N/Jackson

2-27-91 Filed in PTO.

4-18-91 Assignment recorded.

3-11-92 Notice of allowance.

4-27-92 Amendment filed--Jackson will pay issue fee.

Corresponding foreign applications filed in Canada, Japan, Korea and EPO.

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2020110010

PM 1515 (D706) - SN 660932

SMOKING COMPOSITIONS CONTAINING A TARTRATE SALT FLAVORANT-  
RELEASE ADDITIVE

Y. Houminer and J. Naworal  
Chemical Research

This invention provides smoking compositions which contain a novel tartrate salt flavorant-release additive, such as an acetal derivative. Under cigarette smoking conditions, a combustible filler and/or paper wrapper additive pyrolyzes and releases benzaldehyde flavorant as a volatile component of the cigarette smoke.

Schardt/Depaoli/Giancola  
2-26-91 Filed in PTO; assignment recorded.  
4-6-92 1st action.  
5-28-92 Response filed.

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2020110011

PM 1516 (D709) - SN 669571

(Ambrosia) SMOKING COMPOSITIONS CONTAINING A FLAVORANT-RELEASE ADDITIVE

B. A. Demian  
Flavor Development

This invention provides smoking compositions which contain a novel flavorant-release additive. Under cigarette smoking conditions, a combustible filler and/or paper wrapper additive such as a molecular inclusion complex of a beta-cyclodextrin torus structure and vanillin releases vanillin as a volatile component of the cigarette smoke. The released vanillin improves the taste of the mainstream smoke and imparts a pleasant aroma to the sidestream smoke.

Schardt/Depaoli/Giancola

3-14-91 Filed in PTO; assignment recorded.  
4-20-92 Notice of allowance (fee due July 20).  
4-28-92 Giancola instructed to pay fee.

Corresponding foreign applications filed in Canada, Japan, and the EPO.

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2020110012

PM 1518 (D714) - SN 684568

PAPER WRAPPER HAVING IMPROVED ASH CHARACTERISTICS

E. B. Sanders, S. D. Baldwin, B. L. Goodman, C. W. Arterbery, J. L. Myracle  
Cigarette Technology

Relates to a paper wrapper construction for use in conjunction with a smoking article, such as a cigarettes. Specifically, the paper wrapper of the invention has improved ash characteristics.

See also D480 and PM 1596

Glenn/F&N/Miraglia

4-12-91 Filed in PTO; assignment recorded.  
7-3-91 IDS filed.  
12-4-91 1st action rejecting all claims.  
1-21-92 Foreign filing recommendation requested.  
4-6-92 Response filed.  
5-13-92 Telephone conference between Examiner/Miraglia; notice of allowance expected soon.

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PM 1520 (D72) - SN 829876

(D. H. MAX) LAMINATED BELT FOR HIGH SPEED DELIVERY OF FREE FLOWING MATERIAL

J. F. Budjinski II, C. G. Atwell, M. T. Garthaffner, M. D. Belcastro

Directed to a laminated belt for use in a device which delivers free flowing material into receiving spaces separating filter plugs, as the plugs move on a conveyor.

Glenn/F&N/Harnett

1-31-92 Filed in PTO; assignment recorded.

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2020110013

PM 1522 - SN 717064

(NET) PROCESS FOR IMPREGNATION AND EXPANSION OF TOBACCO

K. H. Cho, T. J. Clarke, J. M. Dobbs, E. B. Fischer, J. M. G. Nepomuceno, and R. Prasad  
Physical Research

Relates to a process for expanding the volume of tobacco using carbon dioxide.

Glenn/F&N/McCabe

6-18-91 Filed in PTO; assignment recorded.

4-14-92 1st action allowing all claims except 34 (response due July 14).

4-30-92 IDS filed.

Corresponding foreign applications filed in Argentina, Australia, Brazil, Canada, China, Finland, Hong Kong, India, Japan, Mexico, New Zealand, Norway, Philippines, Singapore, Korea, Taiwan, Venezuela, Yugoslavia, and the EPO designating all countries.

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2020110014

**PM 1523 - SN 742323**

**PRODUCT APPEARANCE INSPECTION METHODS AND APPARATUS EMPLOYING  
LOW VARIANCE FILTER**

K. A. Cox, H. M. Dante, R. J. Maher  
Physical Research

A comprehensive package inspection method to identify bad packages by means of automatic inspection.

Related to PM 1514, 1334, Itran Agreement File

Glenn/F&N/Jackson

8-8-91 Filed in PTO; assignment recorded.

9-10-91 IDS filed.

12-10-91 Formal drawings filed.

1-24-92 Foreign filing recommendation requested.

1-28-92 Supplemental IDS filed.

Corresponding foreign applications filed in Canada, Japan, Korea, and the EPO.

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**PM 1524DES (CIP OF PM 1490) - SN 631790**

**(Cartier) DESIGN - BOX HAVING VERGE LINES AND PINSTRIPING AT REGIONS  
ABOUT ROUNDED SIDE PORTIONS**

R. L. Graham, Z. M. Pham, D. H. Evers, and F. M. Della Crosse  
Engineering

Glenn/F&N/Adler

12-21-90 Filed in PTO.

2-19-91 Assignment recorded.

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2020110015

**PM 1525 - SN 700759**

(Project Gold) CIGARETTE PACKAGING MACHINE AND APPARATUS

J. M. Adams, A. Amendola, F. M. Della Crosse, R. Gallino, J. M. S. Haskins, D. Moir, X. M. Pham, K. B. Shepard, and R. M. Stewart

Relates to manufacturing cigarette packages in which the packaging stock is coated with adhesive before it is supplied to the packaging machine and the machine provides means for activating the adhesive, and preferably setting the adhesive after it has been activated.

Glenn/F&N/Ingerman/Brook

5-15-91 Filed in PTO.  
1-24-92 Foreign filing recommendation requested.  
2-13-92 1st action rejecting all claims (response due May 13).  
3-10-92 Comments on action to Brook.  
3-18-92 Adams comments to Brook.  
3-27-92 Comments from B. Gallino re: Office Action.  
4-30-92 IDS filed.

Corresponding foreign applications filed in Australia, Brazil, Canada, China, Japan, Korea, Taiwan, Russia, and the EPO designating all countries.

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**PM 1526 - SN 802567**

(Cartier) ROUNDED END CIGARETTE BOX

D. H. Evers and X. M. Pham  
Engineering

Relates to a rounded end hinged top cigarette box and a blank for forming the same. The cigarette box includes an inner and outer sleeve and inner and outer oval-shaped end flaps on both ends.

Glenn/F&N/Cassingham

12-5-91 Filed in PTO; assignment recorded.  
3-5-92 IDS filed.

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2020110016



**PM 1531 (D735) - SN 718781**

**IMAGE INSPECTION METHODS AND APPARATUS**

D. M. Ennis  
Product Evaluation

Relates to methods and apparatus for determining whether or not an image is substantially like other images.

Glenn/F&N/Jackson

6-21-91 Filed in PTO; assignment recorded.

9-10-91 IDS filed.

9-20-91 Formal drawings submitted.

1-24-92 Foreign filing recommendation requested.

3-31-92 1st action rejecting all claims (response due June 31).

Corresponding foreign applications filed in the EPO designating all countries.

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**PM 1533 (D738) - SN 866331**

(Project Tomorrow) WRAPPER WITH BANDS OF RECONSTITUTED TOBACCO SHEET FOR SMOKING ARTICLES

E. B. Sanders  
R&D

Relates to wrappers for smoking articles which control burn rate.

Glenn/F&N/Panichi

4-9-92 Filed in PTO.

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2020110017

**PM 1534 (D742, D793) - SN 828423**

(D. H. Max) APPARATUS FOR HIGH SPEED DELIVERY OF FREE FLOWING MATERIAL

J. F. Budjinski, C. G. Atwell, M. T. Garthaffner  
Engineering

Directed to an apparatus for high speed delivery of free flowing material.

Glenn/F&N/Harnett

1-31-92 Filed in PTO; assignment recorded.

4-10-92 1st action rejecting all claims (response due July 10).

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**PM 1539 (D748, 749) - SN 837722**

(Project Tomorrow) APPARATUS AND METHOD FOR LAMINATING PATCHES OF A FIRST WEB MATERIAL ONTO A SECOND WEB MATERIAL

A. L. Collins, B. J. Keen, G. B. Reid, R. R. Ritt, W. H. Stevens, H. W. Vogt

2-18-92 Filed in PTO; assignment recorded.

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**PM 1540 (D750, 751, 752) - SN 837721**

(Project Tomorrow) APPARATUS AND METHOD FOR LAMINATING PATCHES OF A FIRST WEB MATERIAL ONTO A SECOND WEB MATERIAL

A. L. Collins, B. J. Keen, G. B. Reid, R. R. Ritt, W. H. Stevens, H. W. Vogt

2-18-92 Filed in PTO; assignment recorded.

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2020110018

PM 1541 (D753, 754) - SN 837486

(Project Tomorrow) APPARATUS AND METHOD FOR LAMINATING STRIPS OF  
A FIRST WEB MATERIAL ONTO A SECOND WEB MATERIAL

A. L. Collins, B. J. Keen, G. B. Reid, R. R. Ritt, W. H. Stevens, H. W. Vogt

2-18-92 Filed in PTO.

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PM 1542 (D755) - SN 853530

(Project Tomorrow) SMOKING ARTICLE WRAPPER AND APPARATUS AND  
METHOD FOR MAKING SAME

A. L. Collins, B. J. Keen, G. B. Reid, R. R. Ritt, W. H. Stevens, H. W. Vogt  
Engineering

Relates to cigarette wrappers which modify the burn rate of the cigarette  
and to an apparatus and method for efficiently producing such wrappers in  
commercial quantities.

Schardt/F&N/Radulescu

3-18-92 Filed in PTO; assignment recorded.

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2020110019

PM 1553 (D770) - SN 757567

A VOLUMETRIC CHEMICAL REACTION SYSTEM

R. L. Augustine and S. Tanielyan(Seton Hall)

Provides a multipurpose volumetric chemical reaction system which operates at constant pressure and volume, and has electronic automation means for calculating kinetic parameters and a concentration-time plot from the system data output. The automated system is adapted to conduct and monitor either gas-consuming or gas-generating reactions. gas input or gas venting is accomplished in timed constant volume pulses.

Schardt/Depaoli/Giancola

9-11-91 Filed in PTO; assignment recorded.

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PM 1556 (D776) - SN 757563

A FLOW LIQUID-PHASE CHEMICAL REACTION SYSTEM

R. Augustine and Glen Wolosh (Seton Hall)

Provides a flow liquid-phase chemical reaction system for selective conversion of organic compounds with a gas reactant. Has novel means for control of the molar ratio of gas reactant and organic compound dissolved in a solvent medium flowing through a catalyst bed.

Schardt/Depaoli/Giancola

9-11-91 Filed in PTO; assignment recorded.

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2020110020

PM 1557 (D777) - SN 788447

ACYLOXYLATION OF ALKYLAROMATIC COMPOUNDS WITH PALLADIUM-TIN  
CATALYSTS

R. L. Augustine and S. K. Tanielyan (Seton Hall)  
R&D

Process for preparing a surface coprecipitated catalyst with improved  
activity for carbon monoxide oxidation.

Schardt/Depaoli/Giancola

11-6-91 Filed in PTO; assignment recorded.

1-23-92 Telephone interview with Examiner: claims 4-13 elected.

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PM 1557DIV - SN

ACYLOXYLATION OF ALKYLAROMATIC COMPOUNDS WITH PALLADIUM-TIN  
CATALYSTS

R. L. Augustine and S. K. Tanielyan (Seton Hall)  
R&D

Process for preparing a surface coprecipitated catalyst with improved  
activity for carbon monoxide oxidation.

Schardt/Depaoli/Giancola

2-27-92 Filed in PTO.

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2020110021

**PM 1559 (D785) - SN 802340**

**CIGARETTE HOPPER VANE JAM PREVENTION DEVICE**

R. Brinker  
Engineering

Relates to improvements in feeding cigarettes through hoppers or other similar containers.

Schardt/F&N/Cassingham

12-4-91 Filed in PTO; assignment recorded.

1-6-92 Formal drawings filed.

1-9-92 IDS filed.

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**PM 1562 (D789) - SN 796350**

**CIGARETTE PACKS WITH RETENTION CUTS TO FACILITATE CONSISTENT LID CLOSURE**

W. David and D. Wilder  
Engineering

Relates to cigarette packs in the form of boxes which may, for example, have radiused vertical edges.

See also PM 1558

Glenn/F&N/Jackson/Horowitz

11-22-91 Filed in PTO; assignment recorded.

2-10-92 Notice of allowance.

5-1-92 Issue fee paid.

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2020110022

PM 1565 (D783) - SN 822588

TAX-STAMPABLE HALF-CARTON

D. H. Evers

Relates to detachable paperboard double half-cartons for cigarette packs in which two attached half-cartons are run through a standard tax-stamping machine and then may be separated for sale as separate, individual half-carton units.

Schardt/F&N/Hersh

1-17-92 Filed in PTO; assignment recorded.  
3-25-92 1st action (response due June 25).  
4-17-92 IDS filed.  
4-24-92 Draft response received.

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PM 1568 (D794) (ACE 8) (CONT of PM 1590) - SN 849295

(Project Ace) TWO HALF CARTONS RELEASABLY JOINED TO FORM A DUAL CARTON

R. E. Talley and E. Wooldridge  
Engineering

Relates to the releasable connection of two separate cigarette cartons to form a dual carton compatible with commercially available tax-stamping machinery.

See also PM 1565, 1566, 1567

Schardt/F&N/Horowitz

3-10-92 Filed in PTO.  
4-10-92 Proposed IDS received.

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2020110023

PM 1570 (D811, D812) - SN 684563

(Bold/Tomorrow) SMOKING ARTICLES USING NOVEL PAPER WRAPPER

S. D. Baldwin, E. B. Sanders, J. L. Myracle, B. L. Goodman, C. W. Arterbery, W. A. Geiszler, B. Floyd, and W. E. Claflin  
Cigarette Technology

Specifically, uses wrappers which alter the characteristics of the smoking article including puff count, tar delivery and carbon monoxide delivery by adjustment of the paper wrapper's calcium carbonate filler level and of the paper wrapper's basis weight.

Glenn/F&N/Rhoads

4-12-91 Filed in PTO; assignment recorded.  
12-3-91 1st action rejecting all claims.  
3-31-92 Response filed.  
4-21-92 2nd action (response due July 21)--Rhoads drafting response.

Corresponding foreign applications filed in Canada, Japan, Korea, Egypt, Finland, Norway, Saudi Arabia, Turkey, and the EPO designating all countries.

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2020110024



PM 1572 (D778) - SN 713306

SMOKING COMPOSITIONS CONTAINING A PYRAZINEETHANOL FLAVORANT-  
RELEASE ADDITIVE

G. Chan and Y. Houminer  
Chemical Research

Provides smoking compositions having incorporated therein a flavorant component which is characterized by lack of mobility and/or volatility at ambient temperature. Under normal smoking conditions, the flavorant-release additive imparts improved flavor to mainstream smoke and improved aroma to sidestream smoke. For incorporation in wrappers.

Schardt/Depaoli  
6-11-91 Filed in PTO; assignment recorded.

Corresponding foreign applications filed in Japan, Korea, and the EPO designating all countries.

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2020110025

**PM 1575 (D798) - SN 700401**

(Ambrosia) SMOKING COMPOSITIONS CONTAINING A VANILLIN-RELEASE ADDITIVE

R. Southwick  
Chemical Research

This invention provides smoking compositions which contain a vanillin carboxylate type flavorant-release additive. Under cigarette smoking conditions, a combustible filler and/or paper wrapper additive such as 5-carboxyethylvanillin pyrolyzes and releases ethylvanillin as a volatile flavorant component of the cigarette smoke.

See also PM 1418, 1430

Schardt/Depaoli/Giancola  
5-15-91 Filed in PTO; assignment recorded.  
4-28-92 Notice of allowance (fee due July 28--Giancola will pay).

Corresponding foreign applications filed in Canada, Japan, and the EPO designating all countries.

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**PM 1581 (CIP OF PM 1484) (D804) - SN 766048**

(Pack Coupon for FT Box) CIGARETTE BOX WITH ATTACHED COUPON

D. H. Evers  
Package Engineering

See also PM 1538

Glenn/F&N/Jackson  
9-26-91 Filed in PTO; assignment recorded.  
1-28-92 Supplemental declaration and formal drawings filed.  
2-5-92 1st action.  
4-21-92 Response and supplemental IDS filed.

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2020110026

PM 1583 (D806) - SN

ARTICLE TRANSFER REJECTION APPARATUS AND METHOD

M. Belcastro, D. Jones, C. Longest  
Engineering

Relates to an apparatus and method for removing selected articles, such as cigarettes, from a conveyor pathway during manufacturing or processing operations.

Glenn/F&N/Horowitz  
Filed in PTO.

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PM 1585 (D808) - SN 847375

(Tomorrow/Beta) METHOD AND APPARATUS FOR APPLYING A MATERIAL TO A WEB

E. Cutright and R. Scott of Jewett and H. Vogt  
Engineering

Relates to a method and apparatus for treating paper with material in repetitive patterns in such a way that no contact is made between the paper and the apparatus.

See also PM 1679

Glenn/F&N/O'Neill

3-6-92 Filed in PTO.

5-5-92 Copies of documents filed in PTO plus draft IDS.

5-14-92 CG instructs F&N to file IDS.

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2020110027

PM 1589 - SN 792617

(Project Ace) SEPARABLE OR DIVISIBLE LABEL CONTAINING UNIVERSAL PRICE CODE

J. A. DeBlasio, S. J. A. Douglad, J. L. Miller, X. M. Pham, and R. E. Talley,  
Engineering

Relates to the use of a label bearing indicia encoded for automatic pricing to connect two separate cigarette cartons, to form a combined dual carton, the indicia being positioned such that the code is rendered unreadable when the two cartons are separated.

Schardt/F&N/Horowitz

11-15-91 Filed in PTO; assignment recorded.

2-6-92 IDS filed.

4-7-92 1st action (response due July 7).

4-23-92 Supplemental IDS filed.

(4-28-92 JES says he has discussed this with Karen.)

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2020110028

PM 1590 (Ace100, D791) - SN 774529

(Project Ace 100) TWO SEPARATE CARTONS COMBINED AS A SINGLE UNIT  
BY ADHESIVE/CARRIER MEANS

J. M. Adams, C. N. Chance, J. A. DeBlasio, D. H. Evers, W. C. Harris, M. A.  
Kirby, R. W. Newsome, R. E. Talley, W. P. Taylor, E. J. Wooldridge

Engineering

Relates to the connection of two separate cigarette cartons each of which  
contain a single row of five cigarette packs such that the combination of  
the two cartons has substantially the same dimensions as a standard  
cigarette carton which contains two rows of five cigarette packs per row.

Schardt/F&N/Horowitz

10-8-91 Filed in PTO; assignment recorded.

1-6-92 IDS filed.

4-7-92 Formal drawings filed.

Corresponding foreign applications filed in Canada, Japan, Korea, and the  
EPO designating all countries.

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2020110029

**PM 1591 (ACE 500, 501) - SN 832691**

(Project Ace) TAX-STAMPABLE HALF-CARTON

J. M. Adams, C. N. Chance, J. A. DeBlasio, D. H. Evers, W. C. Harris, M. A. Kirby, R. W. Newsome, R. E. Talley  
Engineering

Relates to detachable paperboard double half-cartons for cigarette packs in which a dual half-carton is run through a standard tax-stamping machine and then may be separated for sale as separate, individual half-carton units.

Schardt/F&N/Hersh  
2-7-92 Filed in PTO.  
5-5-92 IDS and formal drawings filed.

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**PM 1595 (ACE 3, 15) - SN 837377**

(Project Ace) TAX-STAMPABLE HALF-CARTON

J. M. Adams, C. N. Chance, J. A. DeBlasio, D. H. Evers, W. C. Harris, M. A. Kirby, R. W. Newsome, R. E. Talley  
Engineering

Relates to detachable paperboard double half-cartons for cigarette packs in which a dual half-carton is run through a standard tax-stamping machine and then may be separated for sale as separate, individual half-carton units.

Schardt/F&N/Hersh  
2-14-92 Filed in PTO; assignment recorded.  
5-5-92 IDS filed.

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2020110030

PM 1596 (D790) - SN 684603

CIGARETTE AND WRAPPER WITH CONTROLLED PUFF COUNT

S. D. Baldwin, R. W. Dwyer, D. J. Newman, B. Floyd, R. M. Rogers, E. B. Sanders, and B. L. Goodman  
Cigarette Technology

Relates to a paper wrapper construction for use in conjunction with a smoking article, such as a cigarette. Specifically, the paper wrapper alters the characteristics of the smoking article including burn rate, puff count, and tar delivery with the use of fine particle size calcium carbonate as a mineral filler.

Glenn/F&N/Miraglia

4-12-91 Filed in PTO.

6-10-91 Assignment recorded.

7-3-91 IDS filed.

3-2-92 1st action rejecting all claims (response due June 2).

3-12-92 Action to inventors for review.

Corresponding foreign applications filed in Canada, Japan, Korea, Egypt, Finland, Norway, Saudi Arabia, Turkey, and the EPO designating all countries.

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2020110031

**PM 1597 (Ace 18, D823) (CIP OF PM1590) - SN 809922**

TWO CARTONS JOINED AS A SINGLE UNIT SEPARABLE INTO TWO SINGLE CARTONS

J. Adams, C. Chance, J. DeBlasio, D. Evers, W. Harris, M. Kirby, R. Newsome, X. Pham, R. Talley

Relates to the connection of two separate cigarette cartons to form a dual carton.

Schardt/F&N/Horowitz

12-19-91 Filed in PTO; assignment recorded.

2-5-92 IDS filed.

4-23-92 Supplemental IDS filed.

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**PM 1598 (Ace 17, D824) (CIP OF PM1590) - SN 810677**

TWO CARTONS JOINED AS A SINGLE UNIT SEPARABLE INTO TWO SINGLE CARTONS

J. Adams, C. Chance, J. DeBlasio, D. Evers, W. Harris, M. Kirby, R. Newsome, X. Pham, R. Talley

Relates to the connection of two separate cigarette cartons to form a dual carton.

Schardt/F&N/Horowitz

12-19-91 Filed in PTO; assignment recorded.

2-3-92 IDS and formal drawings filed.

4-14-92 Amendment filed.

Corresponding foreign applications filed in Canada, Japan, Korea, and the EPO designating all countries.

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2020110032



PM 1600 (D826) CIP of PM1590 - SN 829375

(ACE 14) DUAL CARTON

J. M. Adams, C. N. Chance, J. A. DeBlasio, D. H. Evers, M. A. Kirby, R. W. Newsome, R. E. Talley  
Engineering

Relates to the connection of two cigarette cartons to form a dual carton.

Schardt/F&N/Horowitz

2-2-92 Filed in PTO; assignment recorded.

4-3-92 IDS filed.

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PM 1603 (D829) (CIP OF PM 1590) - SN 831348

(ACE 10) TWO CARTONS JOINED AS A DUEL CARTON SEPARABLE INTO TWO  
INDIVIDUAL CARTONS

J. M. Adams, C. N. Chance, J. A. DeBlasio, D. H. Evers, W. C. Harris, M. A. Kirby, R. W. Newsome, R. E. Talley  
Engineering

Relates to the connection of two separate cigarette cartons to form a dual carton.

Schardt/F&N/Horowitz

2-5-92 Filed in PTO; assignment recorded.

4-27-92 IDS filed.

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2020110033

**PM 1616 - SN 710514**

HINGED LID CIGARETTE CARTON WITH INNERFRAME, AND BLANK AND METHOD THEREFOR (for Marlboro Medium introduction)

Linda S. Latif

Relates to cigarette pack cartons with resemble and function like hinged lid cigarette boxes.

Glenn/F&N/Jackson/Horowitz

6-3-91 Filed in PTO.

7-15-91 Assignment recorded.

8-26-91 Formal drawings and IDS filed.

11-7-91 1st action.

3-5-92 Response filed.

3-30-92 Supplemental amendment filed.

Corresponding foreign applications filed in Australia, Brazil, Canada, Japan, Korea, and the EPO designating all countries.

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**PM 1631 (D843) - SN 825513**

(Pack Coupon for FT Box) HINGED LID BOX WITH ATTACHED POP OUT COUPON

D. H. Evers  
Engineering

Relates to a cigarette pack having additional surface areas which can be used for a coupon or other information which can be easily removed.

Glenn/F&N/Nix

1-24-92 Filed in PTO with IDS; assignment recorded.

4-10-92 Supplemental IDS filed.

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2020110034

PM 1636 (CIP of PM 1590) - SN 827113

(ACE 22) CARTON PROVIDING EASY ACCESS TO PACKAGED GOODS  
CONTAINED THEREIN

D. H. Evers, W. C. Harris, R. E. Talley  
Engineering

Relates to cigarette cartons which allow for easy access to the cigarette  
packs contained therein.

Schardt/F&N/Horowitz

1-28-92 Filed in PTO; assignment recorded.  
3-20-92 Notice of allowance (fee due June 20--Horowitz will pay).  
3-31-92 IDS filed.  
4-8-92 Formal drawings filed.

Corresponding foreign applications filed in Canada, Japan, Korea, and the  
EPO designating all countries.

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PM 1637 (ACE 23) - SN 836836

(ACE) MULTIPLE UNIT CARTON

J. A. DeBlasio  
Engineering

Relates to the connection of at least two cigarette cartons to form a  
multiple unit carton compatible with commercially available tax-  
stamping machinery.

Schardt/F&N/Horowitz

2-19-92 Filed in PTO; assignment recorded.  
3-31-92 IDS filed.  
4-27-92 Supplemental IDS filed.

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2020110035

PM 1643 (D866, 867) - SN

HIGH SPEED VACUUM ASSIST FREE FLOWING MATERIAL INSERTER

J. Budjinski, G. Atwell, L. Stevens, M. Garthaffner, B. Keen, G. Fleischhauer  
Engineering

Relates to a device for very high speed delivery of a controlled amount of free flowing material into discrete receiving spaces between filter plugs in partially constructed cigarette filters.

Glenn/F&N/Harnett  
4-27-92 Filed in PTO.

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PM 1649/1666/1470 (D878) - SN

APPARATUS FOR OPTICALLY INSPECTING CYLINDRICAL SURFACES

Gary Grollmund, Cary Longest and Barry Smith  
Engineering

Provides uniformly distributed light along a cycloidal surface without interference from shadows or light spotting. the uniformly distributed light and adjustable intensity arrays allow surface attributes along the cycloidal surface to be enhanced or dampened for visual or optical detection of inspection methods.

Glenn/F&N/Guiliano  
5-15-92 Filed in PTO.

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2020110036

2020110036

PM 1656 (D887) - SN 823698

QUICK CHANGE GEAR ARM

M. C. Luckado  
Manufacturing

Relates to a method and apparatus to facilitate rotating the printer die in the printer section of a cigarette rod making machine in either a clockwise or counter-clockwise direction without disassembling the printer gearing.

Schardt/F&N/Panichi  
1-21-92 Filed in PTO.  
3-13-92 Assignment recorded.

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PM 1662 (ACE 24, 25) (CIP OF PM1590) - SN 829415

(PROJECT ACE) CIGARETTE CARTON WITH MODIFIED TUCK-IN FLAP

C. N. Chance, J. A. DeBlasio, S. A. Douglas, D. H. Evers, R. E. Talley

Relates to the design of tuck-in flaps on cigarette cartons such that the cartons may be passed through commercially available tax-stamping equipment without modifying or adjusting the tax-stamping equipment.

Schardt/F&N/Horowitz  
2-3-92 Filed in PTO.  
4-3-92 IDS and formal drawings filed.

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2020110037